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ABSTRACT

The guide offers a compilation of teacher developed career education materials which may be integrated with secondary level curriculum and, in some cases, complete unit or course outlines are included. Suggested activities and ideas are presented for the following five subject areas and their related units: art, English (activity suggestions for semester courses and for college preparatory English), industrial arts--home maintenance and repair, physical education, and science (general science, biological science, and chemistry). Objectives, teaching procedures, and resources and materials are presented for each unit. A 12-page list of suggested local field trip sites and guest speakers is included. (EC)

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CAREER EDUCATION

Learning with a Purpose

SECONDARY GUIDE - VOL. 1

- **Art**
- **English**
- **Industrial Arts**
- **Physical Education**
- **Science**
- **Field Trips and Guest Speakers**

CE006075

CAREER EDUCATION PROJECT
STATE FAIR COMMUNITY COLLEGE
1900 Clarendon Road
Sedalia, Mo. 65301

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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Teachers and administrators from Benton, Pettis, and Saline Counties in central Missouri developed the materials in this guide and the other volumes in the secondary level series. A thank you is extended to all those who contributed and to Marilyn Atkinson who prepared the contributions for publication.

The following is a list of the contributors and the school district each is from.

Pettis County

R-V Hughesville: Sarah Fricke

R-IV La Monte: Suzi Bybee
Siebert McDaniel
Kay Byers Sparks

R-VI Smithton: Nadine Moore
Ruth Ann Walk

R-VIII Green Ridge: Jack Chambers

#200 Sedalia: Jewell Fowler
John Meyer
Jinny O'Donnell
Jean Routszong
Selvin Royal
Skip Schulz
Rosalie Smith
Marjorie Uhr

Sacred Heart: Diane Morarity
Beth Phillips
Rick Schreck
Kathy Simones

Benton County

R-I Cole Camp: Becky Schnakenberg
William Smart

R-II Lincoln: Larry Huffman

R-IX Warsaw: Jim Armes
Alan Meyer
Terry Phillips
Darrell Schulz

Saline County

Marshall: Carl Collins
Faye Edde
Karen Hargrave
Lavinia Lile
Russ Whyte

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FOREWORD

Career education at the secondary level strives to develop the relationship between academic studies and life outside of school, to help each student to personally identify a desired life role, and to make possible the preparation necessary for fulfilling that life role.

There is no set "career education program" to be adopted by all school systems. Rather career education is a concept to be adapted to the needs of each community, each school system.

Nowhere in this guide or in any of the others in this secondary level series is there a definition of career education. So many definitions have been developed that any individual can search for--and find--the one that suits his/her purposes. The activities, ideas, and suggestions herein do reflect the concept as it has been understood and implemented by the contributors.

Our goal in preparing and compiling these materials is to provide an idea bank. You as an educator can select those suggestions that could be easily integrated into your curriculum and enhance its value for your students.

Different contributors have approached this goal with various methods. Briefly stated activity suggestions comprise the bulk of the material. However, in some instances, complete unit or course outlines are included.

Please browse through the materials to find ideas that might be integrated with your on-going curriculum. The volumes in the series and the areas covered in each are as follows:

Volume I--Art
    English
    Industrial Art
    Physical Education
    Science

Volume II--Business
    Metrics
    Special Education

Volume III--Foreign Language
    French
    German
    Spanish

Volume IV--Home Economics

Volume V--Mathematics

Volume VI--Social Studies

Don't limit yourself to only one guide--you may find an idea from another discipline that you can use with only slight adjustments. We hope you enjoy the guide and would be happy to hear any comments you have on it.

Phyllis B. Stuerke
Secondary Specialist
Career Education Project
State Fair Community College
Sedalia, MO 65301

ART

6

Subject Area(s) Art

Unit(s) Design (Cartooning)

Objective(s):

Student will be introduced to the field of cartooning and be able to look at it as a possible future occupation. The student will gain knowledge of the cartoonist's occupation and better understanding of the cartoonist and of his work.

Procedure:

Discuss the field of cartooning. Go into its history, training and education, earnings, what the cartoonist does, the different types of cartoons and so on.

Have students review 15 comics (books, strips, animated films, political cartoons and so on) and write a report on each.

Have the students make up their own cartoons for the school newspaper.

Resources and Materials:

SRA Occupational Brief #141, "Cartoonists" (other resources on its back)

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Design (line, color, form)
Drawing (Fashion and Designing)

Objective(s):

The field of fashion design will become a reality to the students. The students will become aware of the many varied opportunities in this field. By designing clothes and studying patterns and dressmaking, the students will become more aware of the human body and its proportions and anatomy. They will also become more aware of the importance of line, form, and color.

Procedure:

Discuss the varied opportunities in this field: patternmakers, designers, fitting model, merchandise manager, buyer, assistant buyer, fashion editor, etc.

Discuss how important it is to have a sense of color, line, form and knowledge of the drawing of the human body and of the fabrics and dressmaking.

You can ask a buyer (check with any of the stores in your town) to be a guest speaker. Have him tell of his occupation, the requirements, training, what he does, earnings, advantages, disadvantages, why he chooses certain fashions over others. Be sure there is a question/answer period.

Have your more advanced students design their own fashions to be accompanied by samples of materials. Either do with the homemaking department or have one of the instructors from the homemaking department speak to the students on how important the knowledge of patterns is.

Resources and Materials:

SRA Occupational Brief #142 "Fashion Designers (other references on the back of this report)

Kit: "Careers in the Fashion Industry," Butterick Fashion Marketing Company

Evaluation:

Evaluate designs.

Comments on use:

Kathy Simones

Subject Area(s) Art II

Unit(s) Illustrator--Children's Books

Objective(s):

The student will "become" an illustrator for children's books.
The student will use imagination.
The student will be a critic of books.

Procedure:

The teacher is the supervisor--the students, illustrators--in a role playing situation.

Use familiar story as warm-up
Example: section of Alice in Wonderland
Have students illustrate first two or three paragraphs.

Then illustrate original story--minimum of 5 illustrations for the story and one for the cover. (5 on one sheet, 12 x 18 - book cover on 9 x 12 paper)

Must be in color, used colored pencils--could let student choose medium--gouche, tempera paint, wax crayolo, pastels.

Students could share their productions with elementary students

Resources and Materials:

Alice in Wonderland, "The Mad Tea Party"

Student written stories

Children's books as examples

Evaluation:

Quality of illustrations themselves and how well they represented the story line.

Comments on use:

More variety in students' work if each uses individual story or in groups of 2-3. Could be used in conjunction with an English class.

Carl Collins

EXAMPLE OF STUDENT WRITTEN STORY

THE BLUE ELVES

by Melinda VanWinkle

There was a forbidden forest behind Billy's house. Tall timber trees and small squirrelly squirrels lived there. Billy liked the forest. He walked there everyday. He played Indian scout and explorer there.

One day he took Nipper, his naughty noodle hound, deep into the forest. They were running and jumping and having such a good time when Nipper saw a squirrelly squirrel, and he left Billy to go on a mad chase.

"Nipper, you naughty noodle hound. Come back! Come back!"

But Nipper didn't come and suddenly it turned cold and dark in the forest. It must be getting late thought Billy.

"Nipper, Nipper, where are you?"

Bill walked and walked past silent stream and perilous pond. He climbed High Hill and crossed the big muddy puddle. Nipper was nowhere to be seen. Billy was so tired. He yawned and knelt down beside a huge tree. He looked up. There half asleep was Oscar Owl.

"Oscar, have you seen Nipper, my naughty noodle hound?"

"Whoo?" the owl asked.

"Nipper, my naughty noodle hound."

"Whoooo?"

"Oscar, I give up. You must be very hard of hearing."

Billy sighed and leaned against the tree. He shut his eyes and wondered where Nipper could be in the deep dark forbidden forest.

Tappity- tap- tap, thumppity- thump- bump. Something was knocking inside the tree. He opened his eyes and gazed at the tree. A small door swung open and out popped a little blue elf, wearing a big beaver hat.

"What are you doing here," squeaked the elf. "I'm looking for Nipper, my naughty noodle hound."

"Precisely," the elf replied.

The elf took out a huge magnifying glass and gazed at Billy.

"Just what is a noodle hound?" he asked. "Is it a cross between a Bouncing Baby Bonker and a Zonking Zinger Dinger?"

"You're funny," Billy replied. "Have you seen Nipper?"

"Whoe's a Nipper, what's a Nipper. Is it a Nipper noodle doodle hound?"

"No, no, no," Billy yelled! "It's Nipper, my naughty noodle hound."

"Precisely," the elf replied. "Nope, but for a small reward I will help you look."

Billy dumped his pockets, spilling out the contents--a broken shoe string, an Indian head penny, a bent yo-yo and a gum wrapper.

"Such rare treasures!" exclaimed the little elf. "I will take them all," he added as he stuffed the goods inside the tree.

"Thank you, little boy. Bye," the elf muttered as he closed the door behind himself.

"Come back, please Mr. Blue Elf. Remember you promised to help me." Billy shouted and banged on the door, but the elf didn't come.

"Just where could that absent-minded elf have disappeared to," Billy thought.

There was a rustle and a bustle among the top branches of the old tree. Billy looked up and saw the little blue elf snuffling about trying to blow a golden trumpet he had carried around his waist. And suddenly there were elves everywhere. Billy couldn't believe it. Elves were on Billy's head, his nose, behind his ears, in his pockets. They peaked out his sock tops. They tickled Billy's nose and they wiggled his toes. Billy laughed and laughed. One of the elves pinched his cheek. Several played tag on the top of his head. Two fat and jolly elves in red P.J.'s slide down Billy's nose.

Finally Billy yelled, "Stop it, please find Nipper, my naughty noodle hound."

"Well, he's not in your back pocket," a gruff grey-bearded elf huffed as he crawled out of the pocket.

"He's not behind your ear," cackled a very cheery lady elf in pink peek-a-boo slippers.

"Nonsense," Billy yelled. "Nipper is in the forest."

"Precisely," gulped the little blue elf in the beaver hat. "So we will go after him."

Billy watched the elves running across the woods. Several elves followed behind on purple pogo sticks. The elves dived under the rocks. They waded across silent stream and perilous pond. They paddled across big muddy puddle in oak leaf rafts. Billy sighed and rubbed his eyes and fell asleep.

Billy felt a nudge at his collar and a lick on his face.

"Nipper, you naughty noodle hound, the blue elves found you!"

"Billy," his father said as he stood by Nipper.

"Oh, hi, Dad. Nipper was lost and the blue elves found him."

"Sure," dad said. "I'm taking you home and putting you to bed before you catch a cold. Such nonsense, spending half the night in a forest. Blue elves, utter nonsense. They simply positively don't exist."

Billy and his father turned around and walked toward their house, with Nipper, the naughty noodle hound, nipping at their heels. Billy looked over his shoulder at the tree that was home to the blue elves. There perched on a branch was the littl blue elf with the beaver hat winking at him. Billy winked back.

A MAD TEA-PARTY

There was a table set out under a tree in front of the house, and the March Hare and the Hatter were having tea at it; a dormouse was sitting between them, fast asleep, and the other two were using it as a cushion, resting their elbows on it, and talking over its head. "Very uncomfortable for the Dormouse," thought Alice, "only as it's asleep, I suppose it doesn't mind."

The table was a large one, but the three were all crowded together at one corner of it. "No room! No room!" they cried out when they saw Alice coming. "There's plenty of room!" said Alice indignantly, and she sat down in a large armchair at one end of the table.

Taken from Alice in Wonderland by Lewis Carroll

Subject Area(s) Art

Unit(s) Scene Designers

Objective(s):

The students' knowledge of stage props and designing will be increased. Students will be aware of the role the scene designer plays in the theater.

Procedure:

Prior to a school play, have the dramatics instructor be a speaker in your class. Discuss the role of a scene designer with your class. Have the instructor then go into the script of the play. The students' assignment then is for each student to design the scenery for the play. Have the dramatics teacher pick the one to be used and then have the class construct it.

Resources and Materials:

SRA Occupational Brief #398 "Scene Designers" (other sources on back of brief)

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Design and Printing (Greeting Designer) Card and Gift Wrap

Objective(s):

Students will be able to make their own cards and wrapping paper. The field of paper designing will be a reality to the students. The students will see how important design, line, form, color are to be successful in this occupation. The students will be introduced to the art of printing.

Procedure:

Discuss the occupation of the greeting card designer. Have the students design their own cards and wrapping paper. Then have them print them (linoleum or screen printing or other).

Go on a field trip to a greeting card company such as Hallmark. Ask the guide about different job opportunities in the company.

Variations

Fabric Designing--you will be working with fabric instead of paper.

Resources and Materials:

Get information from greeting card companies such as Hallmark in Kansas City.

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Design (Commercial Design--Designing the container for a product)

Objective(s):

Students will be introduced to the field of commercial design, package designing in particular.

Procedure:

Have students construct and design a container for a product. You can make it the same product for the entire class or make it different for each. The instructor should assign the product and not let the students pick at random so that the student can experience the feeling of working with a product he didn't choose as a product designer would.

Discuss the field of commercial design.

Resources and Materials:

SRA #12, Job Family Series, Jobs in Art

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Design (Designing a room or grounds)

Objective(s):

To make the student more aware of how their lives are directly involved with design. To introduce the student to the occupations in interior occupations in interior design and related fields, window displays, writers of home furnishings, magazines, furniture designer, fabric or covering designer.

Procedure:

Interior and Exterior Designing

Explain the procedures a decorator would go through.

Have students go through these procedures.

Have specific assignments prepared ahead of time and have students either choose or draw from a hat. (Examples: Design a bedroom for two boys, one 10 and the other 4, that is suitable and economical, design a very restful den for a professor and his conferences as well as his studying, design the grounds of an English tutor home on 3/4 of an acre.

If students want more information, have them come to you as their client.

Each student should give a drawing and written explanation of his plans. This should include paint, fabric, flooring, and paneling samples, etc.

A budget should be set on each assignment (if you wish).

Sketch of floor plan should consist of furniture arrangements, wall elevations, color schemes, cabinets and built-ins. Furniture photos can be taken from magazines or from furniture stores.

Resources and Materials:

SRA Occupational Brief #8 "Interior Designers and Decorators," Science Research Associates, Inc., 259 E. Erie St., Chicago, IL 60611

Paint stores, carpet and linoleum stores and other such stores will be of great assistance to the students. (Contact some ahead of time--these are their future customers.)

For exterior decorating contact hardware stores and nurseries.

Furniture stores are the same as above. Many of these shops have interior decorators working for them.

Evaluation:

Comments on use:

Subject Area(s) Art

Unit(s) Design (Designing a room or grounds), p. 2

Objective(s):

Procedure:

Students can use different media in their assignments, such as tempera, water color or ink.

Students should have cost--furnishing, materials and labor--figured and accompanying the final assignment.

Variations

For a more advanced class, students can handle real jobs. Advertise that anyone interested in a free interior or exterior designing job should contact the school in care of you. The student will go through including the personal interview. (Information in SRA Occupational Brief #8)

Many furniture stores have interior designers working for them. Have one come and speak to the class.

Resources and Materials:

Keep many current magazines related to this subject on hand for the students.

Evaluation:

Each design would be evaluated individually.

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Perspective, Mechanical Drawing (Drawing the floor plan of a house) (Architecture Career)

Objective(s):

To introduce the student to occupation of the architect. To make the student aware of the related career opportunities. To make the student aware of what goes into the planning of the house he/she might have been taking for granted. The student will become more familiar with what is entailed in the building and planning of a home, thereby being better equipped to buy his/her own home later.

Procedure:

After the basics of perspective and mechanical drawing have been introduced, have each student design their house plans with their parents as their customers.

Have the students find out what type of home their parents would like built for themselves (number of rooms and sizes, style of exterior, price range--a realtor or builder can assist in this).

Student will prepare a set of house plans for their house. (Amount of detail will depend on how advanced the students are)

Give detailed information on what an architect does, requirements, training, earnings, etc.

Have an architect come to your classroom as a guest speaker.

Resources and Materials:

Realtors and builders can be of great assistance to the students and yourself.

Keep many magazines related to this project on hand.

SRA Occupational Brief #64 "Architects"

"Employment Outlook for Architects" Bulletin #1550-5 from the 1968-69 Occupational Outlook Handbook, U.S. Dept. of Labor, Bureau of Labor Statistics

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Fine Arts, Painting or Sculpture (Visiting an artist's studio)

Objective(s):

Students will be directly involved with art today and its effects. Students will actually see someone successful in this occupation. Students will be made aware of the occupation of the artist and the buyer (will be exposed to how to buy original works of art, if not professionally, for his private enjoyment).

Procedure:

If there is an artist in residence in your city, arrange to visit his/her studio. If possible, try to visit two artists who share a studio, but whose work is contrasting. Example, Lou Merik and Philemena Bennett have their studio together in Kansas City--he is a free lance artist for Hallmark Cards, portrait painter, and objective (figure) abstract painter; while Philemena is a non-objective art painter. There was a contrast here with two different types of art, people, and perspective buyers of their works. (Commercial art came in here with his work with Hallmark.) The artists usually welcome these visits. Have a tour of the studio. Ask the artist to speak about: his history (background), what qualifications are necessary for his field of work, how does his job affect his life, is it enough to live on, what is his daily routine, what does his work entail, a question and answer period, advantages and disadvantages of life style.

If you are unable to visit a studio, ask the artists to visit your room. Have them bring some of their work and perhaps slides of their studio and the same information as listed above.

Resources and Materials:

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Ceramics

Objective(s):

To introduce the students to the occupational field of ceramics and the opportunities in their field. Students will be introduced to an ancient occupation. Students will be encouraged in their own ceramic work.

Procedure:

Plan a field trip to a potter's studio or something similar (for example, a visit to the Kansas City Art Institute and their ceramics department--let them see the glass blowing going on there also).

Discuss the potter's occupation, training, education, requirement, where and how they sell their wares, and so on.

If this is not possible, get a film on the subject or ask a professional potter to be a guest speaker and bring some of his work.

Resources and Materials:

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Jewelry, Crafts, Metal Work

Objective(s):

To introduce the students to the field of jewelry making and designing. To introduce the students to a new media. To help the student think in more depth about the jewelry he wears, thereby deepening his awareness of the world around him.

Procedure:

Ask in a guest speaker who is a jeweler, a designer and/or maker of jewelry. Have him tell of his work, what he does, the process he goes through to make or design the jewelry, his hours, what education is necessary for this work, what are some of the advantages and disadvantages of his work and so on.

Take a field trip to a jewelry manufacturer.

Have students make their own rings and jewelry.

Resources and Materials:

Mr. Reed of Reed and Sons
Jewelers, 309 S. Ohio,
Sedalia, MO 65301

Evaluation:

Evaluate jewelry.

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Photography

Objective(s):

Students will become familiar with the field of photography and all its varieties. Students are apt to be more professional with their own photos.

Procedure:	Resources and Materials:
Take a field trip through a photo studio. Have the guide show them through the studio and explain the photo process as you go. Have the guide tell of their work and the different types of job opportunities there. (If you can choose a large enough studio, commercial and architectural photography can be included.) Have a photographer as a guest speaker. Have students collect pictures from magazines and newspapers and find what these pictures have in common, thereby finding out what type of photographs are desired by newspapers, etc. Introduce the students to the many different fields of photography, portrait, commercial, fashion, press, industrial, technical and architectural.	Job Family Series, #12 Jobs in Art, SRA, Chapter 6, pages 35-41 Photography: Careers and Opportunities for You by Charles Abel, Philadelphia, Chilton, 1961

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Art History (Visit to Art Museum)

Objective(s):

To deepen the students' awareness of the field of art. Its roll in the past, now, and in the future. To deepen his insight of himself, his world, and the world and customs of others. To introduce student to the careers open in the field of art history museum work by personal contact. To introduce students to career opportunities in furniture making, rug weaving, anthropology, painting, pottery,

Procedure:

Arrange for guided tour in an art museum. Ask guides to include in their tours interviews with different employees in the museum. Examples: guides, art historians, guards--ask for suggestions. Ask these people set questions such as: What duties do you have and what does your job involve? What are your hours? What qualifications are necessary for your work? What are some advantages of your work? What are some of the disadvantages of your work?

Make sure to allow time for individual browsing while at the museum.

Allow enough time to prepare for trip with films, lectures, slides, filmstrips, research, etc.

Obtain books, slides, or other materials with information about the museum to prepare your students for the visit.

Have the students do research on an individual work of art that he/she will be seeing at the museum.

Obtain a history of the museum.

Before the visit, introduce the students to the other occupations that are necessary in order for the museum to exist and then reaffirm them during

Resources and Materials:

Field trip suggestions

William Rockhill Nelson Gallery, Atkins Museum of Fine Arts, Kansas City, MO
St. Louis Art Museum, St. Louis, MO

Nelson Gallery - Apollo: Edited by Denys Sutten. December 1974 EF (100 p.) U.S. $4

St. Louis Art Museum
Contact the Dept. of Education, The St. Louis Art Museum--ask for the teacher's resource center. These contain slides, historical summaries, chronologies, and explanations and research on each slide of works in the museum. This service is free.

Evaluation:

Comments on use:

Subject Area(s) Art

Unit(s) Art History (Visit to Art Museum), p. 2

Objective(s):
jewelry making. To be able to recognize and identify certain artists, periods, and phases of art. To study in depth a specific artist and thereby a specific field and phase of art.

Procedure:	Resources and Materials:
the tours. (Ask the guide for assistance) Some of these are anthropologist, painter, sculptor, weaver, cabinetmaker, potter, architect, draftsman. Also show how art relates to other fields, such as science, math, history, mythology, drama, politics, and so on.	

Evaluation:

Comments on use:

Kathy Simones

Subject Area(s) Art

Unit(s) Art Teacher

Objective(s):

Students will go into a subject in depth. Students will have experienced teaching and thereby will have a greater understanding of what the profession of art instructor entails.

Procedure:

Each student will be instructor for a day.

Have each student do a report on a separate subject and present it to the class along with visual guides to help. These reports can be on an artist, period of art, different media, an occupation having to do with art and a variety of others. (Examples: a student teaching the class how to batik through lecture, handouts, demonstrations, etc.) The successfulness of this activity depends on the help from the teacher. At the outset of this assignment, tell the students information about your occupation, what it involves, education required, your hours, advantages, disadvantages, average earnings and so on.

Resources and Materials:

Evaluation:

Evaluate reports for thoroughness and accuracy of information.

Comments on use:

Kathy Simones

ENGLISH

Subject Area(s) English/Appreciation of Literature
Unit(s) Industrial Revolution (Realism and Naturalism)

Objective(s):

The student should see how economic fluctuations affect job opportunities and life styles.

Procedure:

Using short stories, novels and poetry dealing with economic fluctuations, the student will analyze the fluctuations that have affected job opportunities and briefly relate them to his career choice.

Resources and Materials:

Grapes of Wrath
Sister Carrie
Maggie: A Girl of the Streets
Main Traveled Roads
The Jungle
An American Tragedy
The Godfather

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Appreciation of Literature
Unit(s) "What's in it for me?"

Objective(s):
The student should see himself affected by environment and influential persons.

Procedure:
Given opportunity to read literature to see how environment affects work, the student will write a critical analysis of how his own environment affects his attitude toward work.

After reading literature in which cooperation is a central idea, the student will write a theme analyzing the influence one person has on the lives of others.

The student will investigate the career areas of language arts (reporters, librarians, journalists) for economic benefits and evaluate them in terms of his goals and expectations.

Resources and Materials:
Steinbeck novels, Sandburg poetry, "The Verger" How Green is My Valley

Lillies of the Field, Shane, Bridge Over the River Kwai, Bless the Beasts and the Children

"This Blooming World" 16mm, sound, color, 19 minutes (1970) Portrays man's sensitivity and lack of it to his environment. Pay return postage and insurance of $50. Book 6 weeks in advance. Eastman Kodak Co., Audiovisual Library Distribution, 343 State St. Rochester, NY 14650
"The Journalists" (4613) 16mm, sound, color, 25½ min. Features the opportunities available in journalism. Interviews with noted journalists. Available to 7th grade and above. Pay return postage and book 1 month in advance. Modern Talking Picture Service, 1686 Elmhurst Rd., Elk Grove

Evaluation:

Comments on use:

Subject Area(s) English/ Appreciation of Literature

Unit(s) "What's in it for me?", p. 2

Objective(s):

Procedure:

Resources and Materials:

Village, IL 60007

Write to:
American Newspaper Publishers Association, 750 Third Ave., New York, NY 10017
American Council on Education for Journalism, Ernie Pyle Hall, Bloomington, IN 47405

Evaluation:

Comments on use:

30 Darrell Schulz

Subject Area(s) English/Appreciation of Literature
Unit(s) Growing up Vicariously

Objective(s):

Students should accept that reconstructing values essential to the passing into maturity is the "essence of education." Students should convey attitude that more important than the world giving them something is the goal of their own contributions, to be finally aware that we cannot evaluate what the world gives us, but what we can give to the world.

Procedure:

Do a photographic essay on "The Passage into Maturity." Captions for each picture should accompany the display.

Write poetry which examines the problems of maturing.

Write an editorial for the school paper in which you argue for the values Lippman states as essential for the world of work.

Create a bibliography of novels and movies that center on the issue of passing into maturity.

Gather and put on display symbols of maturity, preferably broken into male/female/child symbols--possible, too, a display of symbols that illustrates an attempt to hang on to youth.

Resources and Materials:

Walter Lippman, "The Passage Into Maturity" Prose and Criticism, Harcourt, Brace

Edward B. Jenkinson, "Toward Developing Responsible Points of View" Harcourt, 1972

Library audiovisual files for film catalogs.

Desmond Morris, The Naked Ape

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Appreciation of Literature
Unit(s) Man and Art

Objective(s):

Awareness how literature serves several useful and satisfying purposes in all our lives. Students should see how literature provides avenues for endless vicarious experiences and how literature is generally used by society to communicate values from generation to generation.

Procedure:

Through small group interaction, have class decide why people watch television.

Examine how games are microcosms for life. Through class interaction, parallels can be illustrated. Commercial games might be brought to class one day to experience and discuss. A large poster display illustrating the analogy could be made. The next step is to examine how literature is like games. What are we asked to read as youngsters, adolescents, college students, etc.? What are the purposes behind these requests? The teacher might want to bring a dozen or so examples from these three levels for students to examine.

Resources and Materials:

R. P. Warren's essay "Why We Read Fiction"

K. Pike's "Tagmemic Theory"
E. Berne's Games People Play
R. Arbrey's The Territorial Imperative

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Prose

Unit(s) Decision-making

Objective(s):

To help the student become more aware of importance of the decisions he makes.

Procedure:

Read stories that involve decision-making. Have students discuss the reasons the character made the decision he did. Then they should discuss how important decision-making is in their own lives: e.g., which decisions would they want to discuss with parents, a friend, a teacher, a lawyer, a minister, etc.

Since conflict is an important element in all fiction (and in life), explore general fiction themes to resolve the conflicts.

Story completion: hand out hypothetical situations for which the student provides a conclusion, suitable and justified in choice of decision.

Resources and Materials:

Accent, Scott's Foreman

A good spot to use pulp literature, Lisa: Bright and Dark, for example.

Parents carries unfinished stories of this sort.

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Prose

Unit(s) Science Fiction

Objective(s):

To become aware of the changing world of work. To make projections of work he may some day be doing. To know how technological change may alter a career choice.

Procedure:

After reading science fiction selection, the student will make projections about what occupations may be found in the future.

Project these occupations on posters or blackboards and discuss what education and training they currently are receiving will be useful in these projected careers.

The student will develop a job description in his career area in which he discusses how technology may affect his work and leisure time 20 years hence.

Resources and Materials:

Science Fiction, Harcourt
Dune, Frank Herbert

2001, Clarke
Brave New World, 1984

One Perfect Day, Ira Levin

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Composition

Unit(s) Exposition - Process Writing

Objective(s):
To analyze the degree to which hobbies and interests affect his present career choice.

Procedure:

Listing the skills and processes required in the career area of his choice, the student will identify and note the degree to which his hobbies and interests have affected his present career choice. Then write a process theme which illustrates how his hobbies and interests influenced his career choice.

Resources and Materials:

Modern Composition, Holt, Rinehart

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Drama

Unit(s) Tragedy

Objective(s):

To become more aware of the importance of decisions in his life (work and leisure). To be more alert to the drama he sees, seeing that decisions give foreshadowing to events.

Procedure:

Since conflict is elemental in drama, explore the ideas of tragedy to discern how decisions help create or resolve the conflicts. What decisions made by the characters influenced the events? Plot graphs could be made on various plays to illustrate how the decision changed the course of the conflict.

After reading The Glass Menagerie and discussing the characters' search for their self-concept, the students will prepare a self-inventory sheet and analyze their readiness to enter the work world.

Resources and Materials:

Oedipus Rex
Agamemnon
Romeo and Juliet
Macbeth
Hamlet
Julius Caesar
The Crucible
Death of a Salesman
The Glass Menagerie, interview summary, next page

Evaluation:

Comments on use:

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Darrell Schulz

How to "Sell Yourself" to an Employer

1. Study your interests and qualifications. Be prepared to give them briefly and clearly during the interview.
2. Before the job interview, learn about the firm. Ask questions about the firm and the job you are seeking.
3. Arrive five or ten minutes ahead of time. Tell the receptionist who you are and whom you wish to see.
4. Be neat and clean with hair combed and fingernails clean. Wear appropriate attire.
5. The employer wants to talk to you. Don't take your friends with you.
6. Sit up straight in your chair, feet firmly on the floor; look alert. Advanced planning will help you to be calm, poised and at ease.
7. Think before answering questions. Be polite, accurate, honest and frank. Give full information. Do not brag.
8. Have guide sheet with a listing of all your jobs, dates of work, your wages, kinds of work you did, and reasons you left.
9. Be ready to show how your training and work experience will help you to get ahead on the job you are asking for.
10. For references give the names and complete addresses of three reliable people who know you and your work.
11. Be confident and enthusiastic, but don't bluff. Use good English and speak distinctly, but don't talk too much.
12. Listen carefully; be polite and tactful. Above all, don't get into any argument with your prospective employer.
13. The employer is interested only in how well you'll fit the job. Don't mention personal, home or money problems.
14. Be grown-up and business-like. Show employer proper respect. Call him/her "Mr.," "Ms."
15. If it seems you won't get this job, seek employer's advice about other jobs with the firm that may come up.

I. SOME POOR WORK ATTITUDES WHICH ARE OBJECTIONABLE TO EMPLOYERS

   A. Carelessness
   B. Unwillingness to follow rules
   C. Laziness
   D. Absence or tardiness without cause
   E. Troublemaking
   F. Too much attention to outside interest
   G. Lack of initiative
   H. Too little or too much ambition
   I. Disloyalty
   J. Irresponsibility
   K. Lack of Adaptability
   L. Misrepresentation

II. QUALITIES AND ATTITUDES THAT AN EMPLOYER VALUES HIGHLY IN AN EMPLOYEE

   A. Ability
   B. Dependability
   C. Initiative
   D. Reliability
   E. Good attendance
   F. Efficiency
   G. Loyalty
   H. Cheerfulness
   I. Helpfulness
   K. Perserverence
   L. Resourcefulness

Questions Most Frequently Asked During Job Interview

1. In what school activities have you participated? Why? Which did you enjoy the most?
2. What jobs have you held? How did you obtain them and why did you leave?
3. What courses in school did you like the best? Least? Why?
4. What qualifications do you have that make you feel that you will be successful in your field?
5. Do you prefer any specific geographic location? Why?
6. How did you rank in your graduating class in high school?
7. Do you think your extracurricular activities are worth the time you devoted to them? Why?
8. What do you think determines a man's progress in a good company?
9. What personal characteristics are necessary for success in your chosen field?
10. Why do you think you would like this particular type of job?
11. What kind of boss do you prefer?
12. Are you primarily interested in making money or do you feel that services to your fellow man is a satisfactory accomplishment?
13. Do you live with your parents? Which of your parents has the most profound influence on you?
14. What have you learned from some of the jobs you have held?
15. What is the source of your spending money? Have you saved any money?
16. What is your major weakness?
17. What type of books have you read?
18. What type of people seem to rub you the wrong way?
19. What have you done that shows initiative and willingness to work?

Interview Summary

NAME ______________________________________

APPEARANCE

___ Very untidy--poor taste in clothes
___ Somewhat careless about personal appearance
___ Satisfactory personal appearance
___ Good taste in dress--better than average appearance
___ Unusually well groomed and very neat--good taste

FRIENDLINESS

___ Appears very distant and aloof
___ Approachable--very friendly
___ Warm, friendly, sociable
___ Very sociable and outgoing
___ Extremely friendly and sociable

POISE-STABILITY

___ Ill at ease--is jumpy and appears nervous
___ Somewhat tense--is easily irritated
___ As poised as the average applicant
___ Sure of himself--appears to like crisis more than most
___ Extremely well composed--can thrive under pressure

PERSONALITY

___ Unsatisfactory for this job
___ Questionable for this job
___ Satisfactory for this job
___ Very desirable for this job
___ Outstanding for this job

CONVERSATIONAL ABILITY

___ Talks very little--expresses himself poorly
___ Tries to express himself, but does fair job at best
___ Average expression
___ Talks well and to the point
___ Excellent expression--extremely fluent

ALERTNESS

___ Slow to catch on
___ Rather slow--requires more than average explanation
___ Grasps ideas with average ability
___ Quick to understand--perceives very well
___ Exceptionally keen and alert

EDUCATIONAL BACKGROUND

___ Poor background
___ Fair background
___ Average background
___ Excellent background

OVERALL EVALUATION

___ Definitely unsatisfactory
___ Sub-standard
___ Average
___ Definitely above average
___ Outstanding

COMMENTS:

Subject Area(s) Dramatics

Unit(s) Careers in Theater

Objective(s):

The student will experience different jobs in theater other than acting by designing a miniature stage set or costumes, building a set or props, designing or building lights.

Procedure:

Students read different plays and then do one of the following:

1. Design a state setting (set designer).
2. Design two sets of costume for the three major characters (costume designer).
3. Build props for miniature stage (carpenter).
4. Design and build lighting (light technician).

Resources and Materials:

Plays
Cardboard
Glue
Electrical equipment
Paint
Scrap materials

Evaluation:

Evaluate each project on creativity, correctness in relation to play and how well done the work is.

Comments on use:

Suzi Bybee

Subject Area(s) Practical English

Unit(s) Job Skills

Objective(s):
To see importance of speech skills in most career choices.

Procedure:
The student will give a three-minute impromptu speech explaining to a prospective employer why he would do well in a particular job he is trying to obtain.
Do before job interviews.

Resources and Materials:
Encyclopedia of Careers

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) Practical English

Unit(s) Job Skills

Objective(s):

To become better prepared for the world of work.

Procedure:

Have each student write up and then type at least one personal resume summary.

Have each student fill out three of four different application blanks. Make sure that they are filled out completely and correctly.

After teaching business letter forms (written, typed) and explaining the purpose of the cover letter, have each student write at least three cover letters in response to ads in newspapers.

After discussing the different financial obligations young people can expect in the world of work, have each student fill out sample budgets to allow them to see the economics of possible jobs.

Discuss job interviews. Bring in local people and have students experience at least one mock job interview. If videotape machine is available, tape the interviews for later viewing and discussion.

Resources and Materials:

Warriner's Grammar and Composition

Counselor

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Creative Writing

Unit(s) Short Plays

Objective(s):

To become aware that rapid technological change may create the necessity for retraining. To experience the career of playwrite.

Procedure:	Resources and Materials:
The student will write and act out skits showing situations where a person might need vocational retraining because of job loss, job change or job advancement. The student should send best scripts to publishing houses to attempt to get them printed. Or, after consultation with instructors and through their assistance, he could attempt to have a play by a local or nearby school.	Writing Incredible Short Plays, Short Poems, and Short Stories, Harcourt Future Shock, A. Toffler The Writer's Market

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Creative Writing

Unit(s) Poems

Objective(s):

To become involved in the career of free-lance writer.

Procedure: Have the student mail poetry manuscripts to magazines, especially those interested in the teenage market. Have the student write occasional verse for greeting cards, holidays, school events, etc.; and have him write verse for special occasions such as Mother's Day, anniversaries, etc.	**Resources and Materials:** The Writer's Market Poems for All Occasions

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Creative Writing

Unit(s) Booklet Project

Objective(s):

To become aware of the local area as a large interrelated society. To experience publication of original work.

Procedure:

Through cooperation with art teacher, have students prepare a booklet on some theme about the area utilizing work from both classes in the project. Poems, essays, short stories, captions, etc. would be desirable. The students should edit, lay out, and market the booklets.

Resources and Materials:

Local newspaper, files, books about the area, Missouri history books, personal interviews.

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Mass Media

Unit(s) Advertising

Objective(s):

To become more aware of the misuse of technology. To investigate how technology can be used to contribute to man's well-being.

Procedure:

Organize a "truth squad" to monitor written articles, advertising and TV shows for biased reporting and prepare and disseminate more complete and accurate information.

Selecting the area of medical technology, the student will investigate the use of technology in measuring and communicating information about a person's health.

Resources and Materials:

Mass Media and the Popular Arts, McGraw-Hill

Today's Health
Listen

Pictures cut from magazines

Write to:
American Advertising Federation, 655 Madison Avenue, New York, NY 10021
American Assoc. of Advertising Agencies, 200 Park Ave., New York, NY 10017
Assoc. of National Advertisers, 155 East 44 St., New York, NY 10017
Television Bureau of Advertising, One Rockefeller Center, New York, NY 10022

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Mass Media

Unit(s) Advertising

Objective(s):

To experience the composition of a TV program. To become alert to the loopholes in most advertising.

Procedure:

Prepare a fifteen minute program and videotape it explaining the techniques of persuasion advertising.

Organize a vertical file which gives many examples of different advertising appeals.

Resources and Materials:

Mass Media and the Popular Arts, McGraw-Hill
Videotape equipment

Magazines, newspapers,
TV programs, leaflets, etc.

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Mass Media

Unit(s) Journalism

Objective(s):

To observe how politicians deliberately cater to special groups. To increase skill in learning through interview, to learn at first hand information about newspaper work, and to investigate procedures of influencing the public mind.

Procedure:

Have the student write an essay analyzing the propaganda used in a political address. Give special attention to the audiences for whom the address was intended. If it was a TV address and thus intended for a broad spectrum of society, analyze which parts were designed for special occupations--the farmer, the hard-hat, the minority group, etc.

Invite a journalist for students to interview about press manipulation and discuss possible topics for considered manipulation: energy, litter, medical checkups. Chart a planned procedure upon the blackboard. (The journalist should be informed of the instructor's intentions at the time of the invitation.)

Resources and Materials:

Mass Media and the Popular Arts, McGraw-Hill for propaganda techniques, pp. 60-65

Speeches found in newspapers, on records and Vital Speeches

Journalist from local paper or instructor from nearby college

Write to:
Journalism Education Assoc.,
Dept. of Journalism, Wisconsin
State University, Eau Claire,
WI 54701

Film: "That the People Shall Know" 16mm, color, sound, 12 min. Features 6 top journalists who describe their careers. Modern Talking Picture Service, 1212 Avenue of the Americas, New York, NY 10036

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Mass Media

Unit(s) Education

Objective(s):

To see that the educational system is a crucial institution in shaping society.
To become more involved in the techniques used in their own education.

Procedure:

Have students give oral reports comparing the U.S. education system with that of another country, emphasizing points of difference. Some attention should be given to the type of people the systems desire to produce and to the socio-political setting in which the system operates.

After investigation, have students write a summary of what psychology tells us about the process of learning. To what extent have these principles been ignored in our schooling? In what ways is career education attempting to utilize these principles?

Resources and Materials:

Mass Media, p. 342, McGraw-Hill

Summerhill, How Children Learn, How Children Fail, Educational Psychology

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Introduction to Communications
Unit(s) Forms of Literature

Objective(s):

To encounter the wide variance of jobs that require skillful writing. To create an awareness that poetry is not just a part of the stuffy books in the library but an important part of our everyday lives. To see how people who have succeeded have believed in themselves.

Procedure:	Resources and Materials:
Have the class prepare visual displays of how writers use their skills in pursuit of their careers. For example, job headings could be shown with examples of that type of writing--from TV scripts to articles on motorcycles.	Magazines, Writer's Market
Have the class briefly study poetic terms and illustrate understanding of the terms by locating the techniques being used in some advertisement.	List of poetic terms
Read biographies and autobiographies and study as a means of learning about people.	Brooks and Warren, Understanding Poetry

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Introduction to Communications

Unit(s) Speech

Objective(s):

To examine the skills required for a job and to allow the student to show enthusiasm for a work area.

Procedure:

Have students answer questions regarding career interest areas extemporaneously while classmates evaluate their language patterns, clarity of answer and directness.

Resources and Materials:

Career Encyclopedia

Evaluation:

Comments on use:

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Darrell Schulz

Subject Area(s) English/Introduction to Communications

Unit(s) Speech

Objective(s):

Students should see worth of planning any spoken activity especially as it relates to his career choice. To understand the importance of service jobs and see the self-satisfaction attained through them. To observe that speech is most effective when it is regulated more and more as the groups grow larger.

Procedure:	Resources and Materials:
Have students bring to class materials and explain to the class how to do something. The class attempts the activity after listening to the explanation. Examples: string patterns, paper airplanes, hats, costume jewelry, etc.	Hobby books, craft books
Have students study elements of persuasive speech and then prepare speeches lauding the merits of service jobs--policemen, firemen, nurses, etc. Included in this could be civic work/organization chairmen, scout leaders, etc.	Speech text (McGraw-Hill) Library Personal interviews
Through group interaction without prior instruction have the class explore the jobs available in the community which require speaking skills. Then have the groups write specific procedures which would facilitate group meetings.	

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Introduction to Communications

Unit(s) Vocabulary

Objective(s):

To help students understand that words do not exist in a vacuum, that they have histories which put the vocation in perspective. Students can and do realize that all jobs do not require excellent academic achievement.

Procedure:

Have the students compile a list of words taken from the area of work in which they are interested. Have the class research the history of these words.

List jobs for which an excellent vocabulary would be necessary, jobs for which an average vocabulary would be needed and jobs for which only a poor vocabulary would be necessary.

The student will identify the minimal level of satisfactory performance for his career area in speech patterns, spelling, handwriting, and grammar. He should review his four year program to see that his plans fit well into the career he has chosen.

Resources and Materials:

World Book Encyclopedia

Dictionary

Charles Funk, Thereby Hangs a Tale and Horsefeathers

Counselor's office

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Introduction to Communications
Unit(s) Types of Grammar

Objective(s):

To see how language is a dynamic cultural phenomenon.

Procedure:

Help students construct personalized geneology charts. Then have them find a good example of the writing from each generation back. Explain the changes in language and how grammar attempts to deal with language.

Build a teenage jargon dictionary. Use 3 x 5 cards. Follow procedure in Websters. Add words as they come into use. Could be kept from year to year for students to see which words become accepted.

Resources and Materials:

The family tree for the Indo-European languages

Cf. A. Burgess' A Clockwork Orange

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) English/Introduction to Communications

Unit(s) Mass Media

Objective(s):

To increase awareness of how media influence career choices and behavior patterns of viewers. To see how media affects our personalities. To see how our leisure time is subject of much competition.

Procedure:

Compile a list of careers publicized in movies and on TV. Analyze the possible reasons for the writer's choice of career for his hero. Examine to what extent the career is glamorized. Examine the characteristics of the hero worthy of emulation.

Write a job profile (personality package) for career choice (i.e., characteristics, habits, hobbies, possessions desirable for the person successful in that career choice). Then analyze which ads in print and on TV address themselves to those within that career. Give special attention to which leisure time activities a career lends itself.

Resources and Materials:

TV, movies, TV Guide

McLuchan, Understanding Media

Mass Media and The Popular Arts

Evaluation:

Comments on use:

Darrell Schulz

Subject Area(s) Speech

Unit(s) Interpersonal Communication

Objective(s):

Student will express feelings on different subjects confidently after building confidence through improvisational speech making.

Procedure:	Resources and Materials:
Each student will hand in six different personal speech topics. All speech topics will be placed in hat. Student will draw a subject and make a speech on tape. Student will listen and evaluate own tape.	Tapes and recorder

Evaluation:

Comments on use:

Suzi Bybee

Overview of College Preparatory English

This is a course designed and presented to allow the student various experiences in writing, in understanding concepts of English literature, in formulating opinions and ideas of self, and in developing specific skills. It is an exercise in forming a philosophy workable for a college-bound senior; immediately, that is the goal. This hopefully extends into understanding of oneself and one's society in determining a choice of career. It is "concern about what the young person decides about his opportunities and what he decides about himself in relation to these opportunities; less interest in the SOMETHING he becomes, and more interest in the SOMEONE he becomes" (Dr. K. Hoyt, University of Maryland).

Jean Routszong

Subject Area(s) Anglo-Saxon Literature
Unit(s) Introduction to Anglo-Saxon culture, relationship between Old English and Modern English

Objective(s):
To see the Anglo-Saxons, not as a primitive culture alone, but one which has contributed to our own language, arts/crafts, concept of heroes, beliefs in fate, coffee-house culture. To see the culture as relevant to our own culture and the Anglo-Saxons as people.

Procedure:

Writings, (original) "Beowulf the Original Guy in the White Hat," "Beowulf Becomes Great Dane," "A Funny Thing Happened to Me on the Way to the Mead Hall," "The Police Blotter Regarding the Havoc at Herot Might Read--"

Project: Develop Beowulf as a comic strip.

Develop TV script for presentation of Beowulf.

Resources and Materials:

Text: Adventures in English Literature, 449-1066, J. B. Priestley
Film: "English History Earliest Times to 1066," Coronet
Filmstrips: "The Survey of English Literature, The Epic Man," Life 76f.
"Our Heritage from Old England," McGraw-Hill
"Classics of Medieval English Literature," Beowulf
Recordings: "Early English Poetry," Folkways 9851
"Beowulf and Other Poetry," Caedmon TC1161
"Beowulf and Chaucer," Lexington 5505

Evaluation:

Evaluate writings, projects.

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Medieval Period

Objective(s):
Student understands various occupations of this age; beginning of emphasis on individual rather than on basic good/evil.

Procedure:
Collect vocabulary words and present, commenting on origin.

Bring in modern ballads of students' choices.

Write original ballad about individuals in conflict.

"What's My Line" TV interviews presentation of the pilgrims on the pilgrimage to Canterbury in Chaucer's Canterbury Tales.

Writing travel brochure for travel to Canterbury.

Role playing of various pilgrims to be identified by class.

Group presentations of the various tales and personalities of those telling them:
1. trades represented
2. class structure

Construct a poll (Gallup-style) of the pilgrims as to their reasons for attempting the pilgrimage to Canterbury.

Resources and Materials:
Adv. in English Literature

Filmstrips: "Great Britain, Its Country and Its People: The Story of the Canterbury Tales" (caricature)

Records: "Cambridge Treasury of English Prose I" (Caedmon TC 1054)

Oxford Book of English Verse

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Elizabethan Age and Renaissance

Objective(s):

Student forms concept of Renaissance, Reformation and their ramifications carrying into our own society; explores attitudes of life reflected in literature of Elizabethan; relates life style, personality traits to occupation.

Procedure:	Resources and Materials:
Role playing--Macbeth in modern setting. Macbeth in mini-script. Project of planning a theater and presenting concept of audience-participation; dinner-theater. Panel discussion of horoscopes, visionaries, etc.--relate to "Exorcist." Conduct mock Salem witch trials.	Macbeth Filmstrip: "Macbeth: Analysis and Interpretation" (SVE) Record: "Macbeth, London" (4343)

Evaluation:

Evaluate projects.

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) 17th Century in English Literature

Objective(s):
Students learn to express thoughts in relation to ideas of 17th century.

Procedure:	Resources and Materials:
Students prepare time charts to correlate events in England/America.	Adv. in English Literature, 1625-1700
Prepare sermon relevant to modern problems; [illegible]e. apathy in the style of John Donne.	"Meditation XVII" "Many Voices" 12A
"No Man is an Island"--Donne: Find examples in modern religions and philosophies.	"Many Voices" 6A-- Cavalier poetry
Relate to original hippie concept of life--happiness or pleasure is the sole good or goal.	"L'Allegro" and "II Pensoroso"
Compare with modern epic; i.e. "Jesus Christ, Superstar."	Paradise Lost
Discussions of purposes of diaries, logs, journals, write sample entries for each.	Samuel Pepys

Evaluation:

Evaluate projects.

Comments on use:

Jean Routzong

Subject Area(s) College Prep English

Unit(s) 18th Century in English Literature

Objective(s):

Students learn how occupations change as a result of change in society, how to cope with environment.

Procedure:

Industrial Revolution and changes in society--students assigned to represent each of following facets of society, telling how their lives have changed as a result of the Industrial Revolution:

a. church
b. social
c. literature

TV interviews, "Man on the Street," etc.

Play examples of music, show illustrations of painting, architecture, interior design, etc., and compare with 20th century examples.

Newspaper origin: Group of students construct an actual newspaper illustrating 18th century papers--"The Spectator." Use the style of the 18th century paper to report current school news.

Resources and Materials:

Adv. in English Literature, Harcourt Brace

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Coffee Houses Then and Now

Objective(s):

Student should understand person's desire to be a part of a group; coffee house as a forerunner to clubs; self-expression, etc.

Procedure:

Construct a brochure for London hotel: "What To Do This Week in London."

Reports on coffee houses: their origin and purpose in 17th century and in the 20th century.

Resources and Materials:

Adv. in English Literature

Independent research

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Romantic Age in English Literature

Objective(s):
Student should understand how emphasis changes are reflected in literature, how philosophies are formulated.

Procedure:	Resources and Materials:
Relate interest in nature in this century and our own relatively current idea of ecology and the function of nature.	Recordings: "Keats and Shelley" (Lexington, 7505)
Discussion of existentialism stemming from this century and the various devotees of this philosophy.	Wordsworth's poetry--selections in anthology
Study of poetry to develop sophistication in skill reading, writing, listening and communicating.	Romantic poets: Keats, Byron, Shelley, Coleridge, Burns, Gray, Blake

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) The Fall of the Bastille--Carlyle

Objective(s):

Student assesses through action of story/essay the concept of French pursuit of liberty, equality and fraternity.

Procedure:

Students are divided into groups--nobles (those inside Bastille), peasants (those outside).

Researching role identities will establish relevant ideas of the cause of liberty.

Resources and Materials:

Carlyle: "Fall of the Bastille"--Adventures in English Literature

Evaluation:

Evaluate written work.

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) "The Educated Man"--Newman

Objective(s):

Student is able to channel his interests and abilities relative to instruction material and various forms of presentation by instructor.

Procedure:

Class divides into groups of four or five students, each group drawing up a curriculum for each high school year, presenting them, thus noting what courses seem most relevant.

Resources and Materials:

Newman: "The Educated Man"--Adventures in English Literature, p. 576
Huxley: "A Liberal Education"--anthology

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Victorian Era

Objective(s):
Student should determine what makes a country great, what determines the mores of society.

Procedure:

Lecture with student explanations for Darwin's Theory.

Report on colonization.

Discussion of Victorian morals, those which carry into 20th century.

Discussion of 20th century attitudes towards what we call Victorian in these areas:
1. religion
2. morality
3. dress
4. art
5. manners

Resources and Materials:

"Victorian Age"--Adventures in English Literature, Harcourt Brace

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Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Book Seminar: Lord Jim

Objective(s):
Student understands a person's being forced to live with consequence of one's own action, cause/effect relationship.

Procedure:
Class reads book, group presentation of summary, sketch of author, character development.

Discuss guilt as strong emotion. Compare with "Red Badge of Courage." Discuss how actions in a split-second affect our lives.

Resources and Materials:
Lord Jim--Conrad

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Crime and Punishment

Objective(s):
Student examines own ideas of how crime alienates one from society, self-guilt and recrimination, ideas of effective punishment for crimes.

Procedure:

Class reads the novel during a quarter. Group seminar presents original ideas contained in novel or one of the following:

- Comparison with Capote's In Cold Blood (guilt/punishment/recrimination).
- Mock trial presenting evidence using characters from the book as witnesses.
- Exchange of ideas of punishment polls on capital punishment.
- In depth discussion of "extraordinary man" in our own history.

Resources and Materials:

Crime and Punishment

Evaluation:

Comments on use:

70

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Huck Finn

Objective(s):

Student learns how environment affects both society and individuals, occupations relative to river culture, superstitions and their origin, concept of "universality" and application in this novel.

Procedure:

Class reads novel along with five others in a 9-week period.

Use of small group (four or five students) to conduct seminar relative to concepts of the novel itself, of Mark Twain, of the culture of the time, and of the interaction of characters.

Resources and Materials:

Huck Finn

Evaluation:

Comments on use:

71

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Great Gatsby

Objective(s):

Student examines values more objectively in other characters and in society, relates to present society and social interaction with peer group.

Procedure:

Class reads the novel.

Groups of six students lead discussion. Relate to movie:

a. concept of Matthew Arnold's term, "philistinism" and application in Fitzgerald.
b. relation of Fitzgerald's "desire to preach at somebody in an acceptable form."

Resources and Materials:

The Great Gatsby

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Lord of the Flies

Objective(s):
Students discuss ideas of savagery in civilization, where the two overlap.

Procedure:

Group presentation--assigned members discuss:
1. Golding as an English novelist
2. Concept of group interaction
   a. How leaders are chosen
   b. How conflicts develop
3. Understanding of allegory
4. Youth emulates age
5. "Civilization is only a breath away from savagery."

Resources and Materials:

Lord of the Flies

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) 1984

Objective(s):
Students formulate ideas about brainwashing or de-humanizing in society.

Procedure:
Class reads novel. Panel of six students analyze plot and characters, ask questions to gain insights.

Students contrast technical societies and human societies by listing examples of:
1. Technical development
2. Human development

Consider the concepts:
1. Can we make change adjust to us, human beings?
2. If we create societies based on technology: can we also make them human societies?
3. Compare allegorically with Animal Farm.

Resources and Materials:
1984, Orwell .

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Women in English Literature:
"Her Story"

Objective(s):
Students form opinions about why women were accepted in various areas and what their contributions have been; become familiar with current endeavors of women in various areas.

Procedure:
Reports given in first person as a proponent of women's lib:
a. Jane Austen
b. Bronte sisters
c. George Eliot

Class members try to identify a short profile of outstanding females in various areas currently.

Resources and Materials:
Individual library research

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Reasoning

Objective(s):

Student should be able to reason in a logical fashion, recognize illogical arguments (sales pitch), determine propaganda or slanted presentations, realize that certain gimmicks (devices) appeal to emotions, be able to write or express opinions derived by logical reasoning processes.

Procedure:

Students bring in articles from newspapers developed by cause/effect relationship and present them.

Discuss classification and identification of labeling, point of view, and forms of reasoning: inductive, deductive, analogy.

Bring in advertisements to point out reasoning process and analyze as to whether valid or faulty.

Resources and Materials:

Lecture or handout by instructor with definitions, references and examples.

English Grammar and Composition, 12, Harcourt, Brace & Jovanovich, Inc.

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Profile: autobiography

Objective(s):

Student learns to express self with ease; to recognize pertinent information about self; to become familiar with records and evaluations available in guidance facility.

Procedure:

Students complete individually with constant supervision by instructor the following:

1. Personal record sheet
2. Profile
3. Letters
    a. College entrance
    b. Job applications

Resources and Materials:

Advertisement for "help wanted" from newspaper

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Concept of one's own life in the future

Objective(s):

Students should look at himself 20 years hence--education, personal goals, career--also determine state of society in the future.

Procedure:

Students write a personal letter regarding a class reunion to be held 20 years hence--letters to be written to the new senior class president. Read letters and note ideas or trends expressed most frequently.

Resources and Materials:

Evaluation:

Comments on use:

Jean Routszong

Subject Area(s) College Prep English

Unit(s) "Bomb Shelter" Unit

Objective(s):
Student thinks of individuals in terms of usefulness to society; recognizes important skills, knowledge, etc.

Procedure:	**Resources and Materials:**
Students choose those persons whom they desire to go to the bomb shelter with consideration as to values of their abilities and construct a story from their own point of view, incorporating the situation into it.	Handout A--next page

Evaluation:

Comments on use:

Jean Routszong

HANDOUT A

College Prep

You had planned a quiet evening at home. Some of your college friends had been invited to talk with a pscyhology professor whom you know. Suddenly Civil Defense alarms sound and everyone goes to your bomb shelter. It then become apparent that the bomb shelter is equipped for only six people for one month. This means that five people must be sacrificed. You have to make the decision since it is your bomb shelter. The others agree that you must stay in the shelter; whom would you choose?

MAY: The psychology professor, seemed cold to some, but was respected by all. She was very intelligent and could take control of the group.

CHET: A young medical student of two years, and he could be very valuable. He refused to stay without his wife.

NANCY: Chet's wife and she was expecting her first child. She was nervous and tense; however, she had to stay if her husband stayed.

ALBERTA: Had extensive training in the field of radiation, but she was very finicky. She had been pampered all of her life.

PAUL: A young minister. He was a diabetic, but he didn't take insulin. He did have to have a special diet.

LAURA: A literature major. She was extremely intelligent and could entertain the group.

HAZEL: Pretty, sexy, and bossy. She was a good cook, and she had training in nutrition and dietetics.

DON: Very attractive and he knew it. He was a flirt, but he had a marvelous sense of humor.

JOE: Very pleasant. He was the only one who lifts (or could lift) the heavy metal plate from the door by himself.

JACK: The only unknown member of the group. He was a mechanic, and he had a knowledge of air filtration systems. He was crude, and he had stolen a candy bar.

Subject Area(s) College Prep English

Unit(s) Brainstorming: What do you plan to return to society?

Objective(s):
Student should think in terms of replacing something for that taken away from society--gain ideas of what or who is society.

Procedure:	Resources and Materials:
Groups of four or five students use brainstorming technique to discuss this concept, each group presents ideas and evaluates/critiques those of entire class.	

Evaluation:

Comments on use:

81

Jean Routszong

Subject Area(s) College Prep English

Unit(s) Note taking

Objective(s):

Students choose significant information and expresses in own words—seeks answers to questions posed during note taking session.

Procedure:

Play a tape (preferably an original one made by instructor) and have students take notes in class.

Discuss: summarizing, using key words and phrases, questions posed by information in notes.

Resources and Materials:

Taped segment of relevant lecture on any part/era of English Literature, i.e., Romantic Age.

Evaluation:

Comments on use:

Jean Routsong

Subject Area(s) College Prep English

Unit(s) Business Communications

Objective(s):

Student learns to develop facility in job-oriented activities in line with his own interest.

Procedure:

Students select projects, working alone or with partner--see information on Handout B.

Resources and Materials:

Handout B--next page

Evaluation:

See Handout B.

Comments on use:

Jean Routszong

HANDOUT B

Forms of Business Communications

I. Basic Projects
Everyone must complete the following ten projects plus one of the three additional units for an M grade.

1. Learn the parts and placement of the business letter form. Master folding the letter and addressing the envelope.

2. Write a telegram and fill out a money order.

3. Fill out a sample job application form.

4. Complete a sample civil service test.

5. Fill out a sample income tax return form.

6. Study the handling of a bank account.

7. Compose an order letter.

8. Write a letter to an official using one of the following situations.
   a. Ask the head of a television station for the return of a favorite program. Or praise or criticize some program.
   b. Recommend to the president of the Board of Education the building of a new swimming pool or gymnasium or the purchase of more books for your school library or of better laboratory equipment.
   c. To the editor of your local paper state the community's need for a new highway, a new school, improved parking facilities, a teen-age recreation hall, or some other civic improvement.
   d. Ask your senator or representative to vote for or against a particular bill under discussion in Congress.

9. Write to request an interview for a job. This may be the result of an ad in the paper, a job you have heard about from a friend, or just inquiring about an opening.

10. With a partner prepare a telephone conversation concerning one of the following situations.
    a. Get prices on decorations and supplies you will need for a party you are planning to give.
    b. Arrange for your class or club to tour a local radio or television station or a newspaper plant.
    c. Inquire about bus, train, or plane fares and schedules for students to attend an out-of-town athletic event, debate or conference.
    d. Order several items you need in connections with your hobby.
    e. Make an appointment with your dentist, hairdresser or auto mechanic.

II. Each person is required to choose and complete one of the following three groups of projects. Choose the one closest to your specific interests.

A. Business Letters
Situations and forms will be provided for the following projects.

1. Writing a letter that asks.
2. Writing a letter that transmits.
3. Acknowledging a request.
4. Acknowledging an order.
5. Acknowledging a reservation request.
6. Writing a claim letter.

B. College Entrance

1. Write a letter applying for admission to a college.
2. Write a letter securing information about a college.
3. Write a letter securing information about scholarships.
4. Write a letter requesting permission to use someone's name for a reference.
5. Complete sample college entrance exam.
6. Complete forms provided concerning housing, etc.

C. Practical Items

1. Write to an older relative who lives at a distance, giving local and family news of interest to him.
2. Write a thank-you letter for a gift or a favor you have received. Remember that, although you may not like a gift, you can honestly praise the color, the workmanship, the donor's thoughtfulness, or the like.
3. Write a letter of sympathy to a friend who has lost a mother, father, brother, or sister.
4. You have ordered and received a product but are displeased with it. Write a letter to the company expressing your complaint.
5. Write a letter of inquiry to a company requesting information concerning a product or service they have.
6. Write a letter requesting a free item.

7. Write an answer to a formal invitation.
The senior class of your high school requests the pleasure of your company at the class banquet to be held in the school gymnasium on the evening of Saturday, May the tenth, at seven-thirty o'clock. Express formally your acceptance or regrets.

8. Work out a family budget. The situation and forms will be provided.

EXTRA PROJECTS

You must acquire an additional 20 points to receive an S grade and 35 points for an E.

1. Prepare and present an oral report on the following subjects:
   - a. Business machines
   - b. Life insurance
   - c. Filing systems
   - d. Federal Reserve System
   - e. Real estate
   - f. Business organization
   - g. Consumer buying
   - h. Credit bureau
   - i. Interest rates
   - j. Wage problems (10 pts.)

2. Put together a notebook with examples of different types of business communications. Label your entrees according to type. Write a discussion of the quality of each letter. (15 pts.)

3. Choose a partner and work out a skit between an employer and employee. Your skit should illustrate a point. Make sure that point is clear. (10 pts.)

4. Interview a business person about the importance of speech and dress in business. Tape the interview or provide a written report of it to be presented orally to the class. (10 pts.)

5. Present a new product and try to "sell" it to the class. (5 pts.)

6. Set up a situation with yourself as an employer. Get a volunteer from the class to apply for a particular job with your company. Do an interview in class. Prepare questions to ask and rate the applicant on a form I will provide for you. (10 pts.)

7. Prepare a bulletin board display on any of the related topics. (10 pts.)

8. If you work, give an oral report on how you got your job and what is involved in doing it. Should be at least 5 minutes in length. (10 pts.)

9. You may do any of the projects from the two units you are not doing. Each will count 5 points.

INDUSTRIAL ARTS

Subject Area(s) Home Maintenance & Repair

Unit(s) Electricity

Objective(s):

At the end of this unit, the students will be able to apply a working knowledge of Ohm's Law.

Procedure:

Students are to study the principles of Ohm's Law in text.

Classroom discussion of Ohm's Law.

Students are to work in groups of four to conduct laboratory experiments to test for differences in resistance, voltage, and amperage in various circuits and record results.

Students are to submit written reports on their findings and their ideas as to when Ohm's Law would be helpful to an electrician or electronics repairman.

Resources and Materials:

Overhead transparency of various circuits (parallel, series & series parallel)

Multimeters--1 for every 4 students

Resistance circuits wired as either parallel, series, or series parallel

Evaluation:

Evaluate written reports.

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

~~Unit(s)~~ Electricity

Objective(s):

At the end of the unit, the student will know how to work with electricity in the safe and proper ways and to use tools and electrical supplies as they are designed to be used.

Procedure:

Discussion of electrical principles:
- Voltage, amperage, resistance, wattage
- Conductors and insulators
- Open & closed circuits
- Path of least resistance
- Grounding plugs

Electrical supplies, their function, use, maintenance, and replacement.
- Breakers & fuses
- Electrical cords & wires
- Outlet boxes

Tools, their use and misuse.
- Insulated handles (limitations on effectiveness)
- Multimeters

Resources and Materials:

Overhead transparency of water circuit for discussion of similarities
Various types of conductors and insulators on display boards
Model circuit with switch
Overhead transparency
Sample display of plug and wire
Display of various types of breakers and fuses
Display board of various types of electrical cords and wires
Display of outlet boxes showing proper use

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Electricity

Objective(s):

At the end of this unit, the students will know the services performed by the Underwriters Laboratories Inc. and the safety standards that an appliance must meet to carry the UL stamp of approval.

Procedure:

Discussion of ways to determine if an appliance is built to perform safely.

Discussion of Underwriters Laboratories Inc. and their services.

View film about Underwriters Laboratories Inc.

Follow-up discussion to stress key notes of film.

Resources and Materials:

Films:
"Above and Beyond"
"Album of Public Safety"
"Danger Sleuths"
All films are free loan from Association-Sterling Films

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Electricity

Objective(s):

At the end of this unit, the students will be able to properly repair small electrical appliance cords and extension cords.

Procedure:

Discussion of proper insulation, proper cord size, proper plug and receptical conditions on small electrical appliances and extension cords.

Demonstration--cleaning cord ends, soldering, removal of old plugs and cords, installation of new plugs, cords, and recepticals.

Students are to repair cords, plugs and recepticals on small appliances and extension cords.

Resources and Materials:

Small appliances and extension cords
(These may either be brought from home by students or donated for repair by any adult.)
Electrical plugs and recepticals both grounding and non-grounding types
Electric cord--2 wire non-grounding & 3 wire grounding

Evaluation:

Evaluate student work.

Comments on use:

91

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Electricity

Objective(s):

At the end of this unit, the students will be able to trouble shoot and make minor repairs on small electrical appliances.

Procedure:

Teacher demonstration and discussion on the principles of operation, repair and adjustment on the following small appliances.

- Electric irons
- Toasters
- Electric heaters
- Fans
- Mixers
- Can openers
- Electric hand drills
- Other small appliances that may be produced by students

Students are to trouble shoot and repair small electrical appliances.

Resources and Materials:

Manufacturers service and repair manuals
Heat test plate for electric irons
Replacement coils and minor parts may be carried in stock by the school
Small appliances.
(These may either be brought from home by students or donated for repair by any adult.)

Evaluation:

Evaluate student work.

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Electricity

Objective(s):

At the end of this unit, the students will know the local building code limitations placed on home owners wishing to do their own electrical wiring and why these limitations are necessary.

Procedure:	Resources and Materials:
Students are to study a copy of the local building codes taking note of jobs that require an electrician and those that can be done by the home owner.	Local building codes handbook
Guest speaker to discuss why building codes are important to the city and discuss job opportunities and requirements in the electrical field.	Guest speakers: City building inspector Electricians union representative Electrician

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Electricity

Objective(s):

At the end of this unit, the students will be able to properly diagram and wire parallel and series circuits.

Procedure:

Repeat discussion of series and parallel circuits from previous lesson.

Students are to work in groups of four on the following laboratory projects.

Diagram a parallel light circuit on paper to include the following--a power source, 3 light fixtures, and a switch.

Using the diagram from above, wire the parallel circuit and have it checked by the teacher before the switch is closed.

Diagram a series light circuit on paper to include the following--a power source, 3 light fixtures, and a switch.

Using the diagram from above, wire the series circuit and have it checked by the teacher before the switch is closed.

Resources and Materials:

Power sources (these can be 6 or 9 volt batteries or a reduced voltage ac source)

Two terminal light fixtures with stand-up bases

Single throw switches

Electrical wire, single strand with alligator clips on each end

Evaluation:

Evaluate each group's work.

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Plumbing

Objective(s):

At the end of this unit, the students will know the local building code limitations placed on home owners wishing to do their own plumbing and why these limitations are necessary and the type of job opportunities available in the plumbing field.
At the end of this unit, the students will be able to describe the construction and functions of several of the types of plumbing valves, faucets, and traps.

Procedure:	Resources and Materials:
Students are to study a copy of the local building code taking note of jobs that require a plumber and those that can be done by the home owner.	Local building codes handbooks Plumbing Procedure Plans may be obtained from Home Building Plan Service.
Guest speaker to discuss why building codes are important to the city and discuss job opportunities and requirements in the plumbing field.	Guest speakers: City building inspector Plumbers union representative Plumber
Teacher discussion of construction and function of each of the displayed fixtures.	Display board of various plumbing fixtures (possibly cutaway sections)
Student discussions of which fixtures would work best in certain situations and why.	

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Plumbing

Objective(s):

At the end of this unit, the students will know how to locate and turn off the main water supply shut off valves.

Procedure:

Discussion of plumbing symbols used on plumbing diagrams.

Discussion of probable locations for shut off valves.

Display of common shut off valve and discussion of how it works.

Students are to locate the shut off valve on a plumbing diagram.

Students are to locate the shut off valve in their home and report the location to the class during the next class period.

Resources and Materials:

Plumbing diagram from a set of house plans

Plumbing Procedure Plans may be obtained from Home Building Plans Service.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Plumbing

Objective(s):

At the end of this unit, the students will know how to properly replace a faucet washer.

Procedure:

Discussion of the construction of faucets and how they are repaired.

Teacher demonstration: disassembly, cleaning, installation of washers, O-rings, and worn parts, assembly.

Students are to work in groups of four and repair faucets in the procedure prescribed by the teacher.

Resources and Materials:

Faucets--one faucet for each group of four students

Overhead transparencies of different faucets

Plumbing Repairs may be obtained from Nat'l. Plan Service Inc.

Evaluation:

Evaluate group work.

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Plumbing

Objective(s):

At the end of this unit, the student will be able to properly repair a water closet flush tank.

Procedure:

Discussion of how the flush tank mechanism works.

Teacher demonstration: disassembly, cleaning, replacement of parts, assembly, adjustment.

Student groups of four are to disassemble, clean, replace worn parts, assemble and make all necessary adjustments on a flush tank.

Resources and Materials:

A functioning water closet is very desirable for this unit.

Plumbing Repairs may be obtained from Nat'l. Plan Service, Inc.

Evaluation:

Evaluate group work.

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Plumbing

Objective(s):

At the end of this unit, the students will be able to clean traps and drain pipes.

Procedure:

Discussion of how a trap works and its function in the drainage system.

Discussion of chemical cleaners and their effectiveness.

Teacher demonstration of how to disassemble trap for cleaning.

Discussion of ways to clean drain pipes.
  Chemical and mechanical

Resources and Materials:

Plumbing Repairs may be obtained from National Plan Service Inc.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Plumbing

Objective(s):

At the end of this unit, the students will know the principles of operation, advantages, and care of water softening units.

Procedure:

Discussion of principles
- Filtering
- Chemical wash

Discussion of advantages
- Plumbing life
- Water heater life
- Laundry savings

Discussion and demonstration on maintenance and recharging of unit.
- Removal of filters
- Replacement of sale solutions in unit

Resources and Materials:

Booklets can be obtained from the following companies free of charge. These booklets will describe the advantages, how the unit operates, and the maintenance requirements:
- Culligan Inc.
- Morton Salt Co.
- F. E. Myers & Bro. Co.
- Nat'l. Quality Water Committee
- Water Refining Co.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repairs

Unit(s) Heating systems

Objective(s):

At the end of this unit, the students will know the principles of operation, advantages and disadvantages and the proper care of forced air heating systems.

Procedure:

Discussion of principles of operation of forced air heating systems--convection.

Discussion of advantages and disadvantages of forced air heating systems.
- Insulation requirements
- Cleanliness (fiber filters, static electric filters)
- Control of heat
- Air conditioning installation
- Initial cost
- Types of fuel
- Cost of operation

Discussion and demonstration of home owner performed maintenance.
- Cleaning and replacing filters
- Lighting pilot
- Cleaning vents

Resources and Materials:

Booklets can be obtained from the following companies free of charge. These booklets will describe the advantages, how units operate and maintenance requirements:
- Airtemp Div., Chrysler Corp.
- York Div., Borg-Warner Corp.
- Dunham-Bush Inc.
- General Electric Co.
- Lennox Ind. Inc.
- Honeywell Inc.
- Singer Co.
- Weil-McLain Co.
- Williamson Co.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair
Unit(s) Heating Systems

Objective(s):

At the end of this unit, the students will know the principles of operation, advantages and disadvantages and the proper care of steam and hot water heating systems.

Procedure:

Discussion of principles of operation of steam and hot water heating systems.

- Conduction
- Convection
- Radiation

Discussion of advantages and disadvantages of steam and hot water heating systems.

- Insulation requirements
- Cleanliness
- Control of heat
- Air conditioning installation
- Initial cost
- Types of fuel
- Cost of operation

Discussion and demonstration of home owner performed maintenance.

- Cleaning registers
- Lighting pilots
- Draining and flushing the system

Resources and Materials:

Booklets can be obtained from the following companies free of charge. These booklets will describe the advantages, how units operate and maintenance requirements:

- Weil-McLain Co.
- Williamson Co.
- Intertherm Inc.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Heating Systems

Objective(s):

At the end of this unit, the students will know the principles of operation, advantages and disadvantages and the proper care of electrical heating systems.,

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Procedure:

Discussion of principles of operation of electrical heating systems.
- Radiation
- Resistance
- Induction

Discussion of advantages and disadvantages of electrical heating systems.
- Insulation requirements
- Cleanliness
- Control of heat
- Air conditioning installation
- Initial cost
- Cost of operation

Because these units require an electrician or other trained personnel, maintenance discussion should be limited to how and who to contact when something goes wrong.

Resources and Materials:

Booklets can be obtained from the following companies free of charge. These booklets will describe the advantages, how units operate and maintenance requirements:
- General Electric Co.
- Climate Control Div., Singer Co.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair

Unit(s) Heating Systems

Objective(s):

At the end of this unit, the students will know the principles of operation, advantages and disadvantages and care of central air conditioning units and window air conditioning units.

Procedure:

Discussion of principles of operation of air conditioning units.
- Condenser units
- Cooling units
- Freon charge
- Dehumidification

Discussion of advantages and disadvantages of central air units and window mounted units.
- Efficiency
- Control of air
- Distribution of cooled air
- Initial cost
- Cost of operation
- Appearance

Discussion and demonstration of maintenance.
- Cleaning and replacing filters
- Cleaning coils
- Winter protection

Resources and Materials:

Booklets can be obtained from the following companies free of charge. These booklets will describe the advantages, how the units operate and maintenance required:
- Research Products Corp.
- Singer Company
- Mueller Climatical Corp.
- McGraw Edison Company
- Lennox Industries Inc.
- Honeywell Inc.
- General Electric Co.
- Dunham-Bush Inc.
- Airtemp Div., Chrysler Corp.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair
Unit(s) Heating Systems

Objective(s):

At the end of this unit, the students will know the principles of operation and care of humidifiers and dehumidifiers.

Procedure:

Discussion of principles of operation of humidifiers and dehumidifiers.

Discussion of maintenance on humidifiers.
- Cleaning filters
- Cleaning and replacing evaporation platen
- Replacement of water in unit

Discussion of maintenance on dehumidifiers.
- Cleaning filters
- Cleaning condenser
- Removal of condensed moisture

Resources and Materials:

Booklets can be obtained from the following companies free of charge. These booklets will describe the advantages, how the units operate and maintenance required:
- Research Products Corp.
- Singer Company
- Mueller Climatical Corp.
- McGraw Edison Co.
- Lennox Industries Inc.
- Honeywell Inc.
- General Electric Co.
- Dunham-Bush Inc.
- Airtemp Div., Chrysler Corp.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair
Unit(s) Protective Finishes

Objective(s):

At the end of this unit, the student will know the basic characteristics and uses of several common protective finishes.

Procedure:

Discussion of characteristics and uses of the following finishes.

- Varnish
- Lacquer
- Enamel
- Shellac
- Stains
- Fillers
- Sealers
- Latex paint
- Oil paint
- Antique finishes

Students should be shown comparative samples of several of the most common finishes and surface treatments to enable them to form a personal opinion on the asthetic values of each.

Discussion of solvents used to thin each finish and to clean brushes, rollers, and other equipment.

Resources and Materials:

Sample boards of several of the most common finish applications.

Handbooks and pamphlets may be ordered from the following companies free of charge. These will describe the different protective coverings, give hints for better results and to apply each:

- Samuel Cabot Inc.
- California Redwood Assn.
- Dupont
- Olympic stain
- PPG Ind. Inc.
- Wilson-Imperial Co.

Evaluation:

Comments on use:

John Meyer

Subject Area(s) Home Maintenance & Repair
Unit(s) Protective Finishes

Objective(s):

At the end of this unit, the students will be able to properly remove an old finish from a wood surface and prepare it for refinishing.

Procedure:

Discussion of the various types of paint and varnish removers, their composition, how they work, and how they should be used.

Teacher demonstration of proper procedure for removing old finish and preparing the wood for the new finish.

Students are to remove an old finish and prepare the wood for a new finish on their individual projects.

Resources and Materials:

Small pieces of furniture that are to be furnished by the students or donated for refinishing.

Evaluation:

Evaluate students projects.

Comments on use:

John Meyer

Subject Area(s) Home Mainte
Repa
Unit(s) Protective Finishes

Objective(s):

At the end of this unit, the student will be able to properly apply several
the most common protective finishes.

Procedure:

Discussion and demonstration on proper application of the following finishes.

Varnish	Fillers
Lacquer	Sealers
Enamel	Latex paint
Shellacs	Oil paint
Stains	Antique finishes

Students are required at the end of the unit to apply at least one type of finish to a project or practice piece and should be encouraged to work with as many of the different types as time permits.

Resources and Materia

Paint brushes (one pe
student)
Assortment of differe
finishes
Practice pieces for s
use or projects built
students or projects
from home for refinis

Evaluation:

Evaluate student work.

Comments on use:

John Meyer

PHYSICAL EDUCATION

Subject Area(s) Physical Education

Unit(s) Backpacking

Objective(s):

The student will learn the fundamentals of backpacking.
The student will become aware of careers related to backpacking.

Procedure:

The following questions should be answered:

Why do people go?

Examples: To learn about the wilderness.
- Health
- Recreation
- Stimulation
- Appreciation

Who can go?

What equipment is necessary and the cost?
Have students develop lists, discuss and devise total list.

What types of clothing are necessary?

How does a person determine what should be taken along on a backpacking trip?

What are some safety precautions and rules to follow?

Where can you go?
Have each student find out about one place and share information about it with others.

Resources and Materials:

Introduction to Backpacking by Robert Colwell
The Complete Walker by Colin Fletcher
Backpacking by R. C. Rethmel
The Handbook of Wilderness by George S. Wells
Occupational Outlook Handbook

Film: "The American Trail" 16mm, color, sound, 28 min. (1968)
U.S. Bureau of Outdoor Recreation, Radio-Television Liaison Officer, Washington, DC 20240
Book well in advance. Return five days after receipt by parcel post.

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Backpacking (p. 2)

Objective(s):

Procedure:

What are some careers that branch off from backpacking?

Examples: Guides on outings sponsored by organizations
Work for backpacking agencies
Work in stores selling backpacking equipment

Have students who are interested research areas of interest and relate to other students.

Resources and Materials:

Evaluation:

A written test could be given on the fundamentals of backpacking. Ideally, the class would actually experience backpacking.

Comments on use:

Louella Kay Byers

Subject Area(s) Physical Education

Unit(s) Bicycling

Objective(s):

The student will learn the fundamentals of bicycling.
The student will learn about occupations related to bicycling.

Procedure:

The following questions should be answered:

What equipment is necessary to go biking and the cost?
  Have students list necessary equipment and cost that would purchase.

How does a student select a bike?
  After discussion, ask students to determine if they want to stay with choices already made or if they might make different choices now in relation to which bike to purchase.

What are the bike safety rules?
  Have a policeman come in to talk about bike safety rules.

Who can go bicycling?

Why do people go bicycling?
  Examples: Recreation
  To release tension

How can bicycling keep a person physically fit?
  A physician could be invited to speak about this.

Resources and Materials:

Bike Ways by Lillian & Godfrey Frankel
Cycling Manual by R. John Way
The Complete Book of Bicycling by Eugene A. Sloane
The Boy's Book of Biking by Allan A. Macfarlan
Better Cycling by Peter Roberts
Bicycles and Tricycles Maintenance and Repair by Robert Whiter
Royal Society for the Prevention of Accidents by Peter Roberts
Bicycling for Recreation and Commuting, U.S. Government Printing Office
Conquer the World and Cycling Crazy by Charles Messenger
Occupational Outlook Handbook L2.d:1785 S/N 2901-01083

Film: "Championship Bicycle Safety: (RV-402) 16mm, color, sound, 13 min.
Association-Sterling Films, 8615 Directors Row, Dallas, TX 75247
Return postage, book 10 weeks in advance, give two dates.

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Bicycling (p. 2)

Objective(s):

Procedure:

How can the students start a bicycling club in their community?
- Have students talk to people in community to determine interest. Could write to other communities to find out how to start a club.

Can anyone take part in bicycle racing?
- Interested students could find additional information and present to class.

What are some career related activities that students could do besides going bicycling for recreation?
- Maintenance and repair
- Clerk at a bicycle shop
- Work for agencies that schedule biking trips

Interested students could do research in areas of interest and present to class.

Resources and Materials:

"If Bicycles Could Talk" (1967) 16mm, sound, color, 13 min. Pay return postage, book 2 months in advance.
Aetna Life & Casualty, Public Relations and Advertising Dept., Film Library, 151 Farmington Ave., Hartford, CT 06115

"The Day the Bicycles Disappeared"-- movie, 16mm, sound, 14 min. (Grades 3-8)
AAA Foundation for Traffic Safety, Motion Picture Services, P.O. Box 252, Livingston, NJ 07039
Pay return postage, book 3 months in advance.

"Planning a Community Bike Safety Program" (RV-403) 16mm, sound, 27 1/2 min., color
Association-Sterling Films, 8615 Directors Row, Dallas, TX 75247. Book 10 weeks in advance, give two dates.

"Road to Adventure" (S-099) 16mm, sound, color, 30 min. Return postage. Book 10 weeks in

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Bicycling (p. 3)

Objective(s):

Procedure:

Resources and Materials:

advance, give two dates.
"Wonderful World of Bikes" (S-320) 16mm, sound, 27 1/2 min., color (1966)
Association-Sterling Films
Return postage, book 10 weeks in advance, give 2 dates.

Filmstrips: "Bikeway" (BW-104) sound, color, 24 min. Sound by disc, 33 1/3 rpm
Association-Sterling Films
"How to Improve Your Cycling" (3 units)
Association-Sterling Films

Evaluation:

A written test over safety rules would help motivate students to learn them.

Comments on use:

Bicycling is an important activity for this unit.

Louella Kay Byers

Subject Area(s) Physical Education

Unit(s) Camping

Objective(s):

Procedure:

The following areas should be covered:

Discussion of necessary equipment and the cost.

- a. Tent
  - 1. Should allow good air circulation
  - 2. Should be equipped with floor
  - 3. Insect netting optional but preferable
- b. Fire-stove

After discussing safety tips of camping, students could build camp fires.

What are different types of camping?

- a. Tent camping
- b. Backpacking camping
- c. Trailer camping

Have each student describe the kind of camping that is most appealing personally and explain why.

What type of clothing should students wear on a camping trip or campout?

- a. Durable
- b. Sensible ones
- c. Jeans
- d. Flannel or denim shirts
- e. Tee-shirts
- f. Tennis shoes or hiking boots

Resources and Materials:

Scoutmaster's Handbook of Boy Scouts of America, Camp Stoves and Fireplaces, U.S. Government Printing Office
Building Your Safe Campfire
Camping Safely With Liquified Petroleum Gas
Camping With a Purpose, U.S. Government Printing Office
Backpacking the National Forest Wilderness
First Aid Book by American Red Cross
Occupational Outlook Handbook

Films: "America Goes Camping" (S-453) 16mm, sound, color, 28 min.
Association-Sterling Films, 8615 Directors Row, Dallas, TX
Pay return postage, book 10 weeks in advance. Give two dates.
"Wilderness Survival" (2698) 16mm, color, sound, 15 min. Available for junior high and above. Pay return postage, book 10 weeks in advance, give two

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Camping (p. 2)

Objective(s):

Procedure:

On a camping trip, what type of cooking utensils and food is needed?

a. Menu kept to a minimum of difficulty while nutritious
b. Gear
    (1) Grill over rocks
    (2) Plates and eating utensils
        (a) Paper and plastic
        (b) Durable tin

What would be some safety devices or features students should know before going on a campout?

What are the basic first aid procedures?
Develop a good, basic first aid kit.

Where can students go camping?
Have each student plan a camping trip that he or she would like to take.

What are some career related activities?

a. Work as clerk in camping store
b. Work at camping grounds
c. Work for camping clubs or organizations
d. Be a sales representative of camping equipment
e. Work at places that rent tents or trailers

Interested students could do additional research and present information to others in class.

Resources and Materials:

dates.

Association-Sterling Films
"The Westward Way" 16mm, color, sound, 27 min. Pay return postage, book two weeks in advance. Heinz U.S.A., Film Department, P.O. Box 57, Pittsburg, PA 15230
"Big Country Camping" 16mm, color, sound, 14 1/2 min. Pay return postage, book one month in advance. National Cotton Council of America, Audiovisual Services, P.O. Box 12285, Memphis, TN 38112

Additional Sources:

American Camping Association, Bradford Woods, Martinsville, IN 46151
National Camping Assn., 353 West 56th Street, New York, NY 10019
Association of Private Camps, 55 West 42nd Street, New York, NY 10036

Evaluation:

A written test can be given over fundamentals including safety rules and first aid.

Comments on use:

Simulating camping experiences would be excellent, if feasible.

Louella Kay Byers

Subject Area(s) Physical Education

Unit(s) First Aid

Objective(s):

Procedure:

The following areas should be covered:

Who should know about first aid?

What are the basic things everyone needs to know how to treat?
  a. Bites and stings
  b. Burns and scalds
  c. Fractures and dislocations
  d. Foreign bodies
  e. Wounds

What should be done in the case of a serious injury?
  a. Give urgently necessary first aid
  b. Have victim lie down
  c. Check for injuries
  d. Plan what to do
  e. Carry out plan

What are symptoms of heart attack, apoplexy, fainting, and epileptic convulsions; what does a person do for them?

Have a nurse or doctor come in to cover this. Preventive measures should also be covered.

Resources and Materials:

First Aid Book by American Red Cross

Scoutmaster's Handbook by Boy Scouts of America

Penguin Handbook of First Aid by A. C. White-Knox

What To Do Until the Doctor Comes by William Bolton

Occupational Outlook Handbook

Films: "Heart Attacks and Sun Strokes" American Red Cross

"Cardiopulmonary Resuscitation--Recent Developments and Emergency Care" (10608) 16mm, color, sound, 28 min. (1972)
Pay no postage charges. Book 8 weeks in advance. Ayerst Laboratories, Mr. Robert T. Clough, Jr., Director of Audio-visual Services, 685 Third Ave., New York, NY 10017

"Fractures and Sprains"
"Standard First Aid Series" 16mm, sound, 270 min., 10 films 27 min. each (1964) From local, county or state Red Cross

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) First Aid (p. 2)

Objective(s):

Procedure:

How does a person give artificial respiration and why?

Have a nurse come in to speak to the class and demonstrate on a recessive Annie.

How should a student set a broken bone or sprain?

What are some fields related to first aid?

a. Assistant coaches
b. Ambulance drivers
c. Camp directors
d. Coaches
e. Doctors
f. Firemen
g. Instructors in Red Cross Programs
h. Lifeguards
i. Managers
j. Nurses
k. Policemen
l. Teachers
m. Trainers

Interested students can research area of interests and present to class.

Resources and Materials:

~~Book 2 months in advance~~.
~~Pay return postage~~.
"First Aid Now" (S-638) 16mm, color, sound, 26 min. (1963) Available to junior high and above, pay return postage. Book 2 weeks in advance.
Bureau of Mines, U.S. Dept. of Interior, 4800 Forbes Ave., Pittsburg, PA 15213
Filmstrip: "Doctor's Orders" 10 min., black & white, sound Pay return postage, book 4 weeks in advance.
Veterans Administration, Audio-visual Service, Central Office Film Library (037B1) Washington, DC 20420
"Open for Infection" (1946) sound, black & white
Veterans Administration, Audiovisual Service, Central Office Film Library (037B1) Washington, DC 20420

Evaluation:

Written test.

Comments on use:

Louella Kay Byers

Subject Area(s) Physical Education

Unit(s) Fishing

Objective(s):

The student will learn the fundamentals of fishing as an avocational area that could be developed.
The student will learn about careers related to fishing.

Procedure:

What is basic equipment students need to go fishing?
- a. 10' of 12' long bamboo
- b. Fishing rod
- c. Short silk or cotton line
- d. Hook
- e. Sinker
- f. Bobber

Students could take a field trip to a sporting goods store or a salesclerk or manager from such a store could come to class to show equipment and talk about the job. If a parent is an avid fisherman, he or she would be a good resource person to cover this area.

What type of bait does a person use and where do you find them?
- a. Live
  - 1. Worms
  - 2. Minnows
- b. Cut bait
  - 1. Beef liver
  - 2. Any cut meat
- c. Career--work in bait shop or start one.

Resources and Materials:

Fishing for Fun by Herbert Clark Hoover
Outdoor Life, New Standard Encyclopedia
Frank Forester's Fish and Fishing by Henry W. Herbert
Sport Fishing USA
Warm-Water Fish Ponds, U.S. Government Printing Office
Occupational Outlook Handbook
Fishing in National Park System, U.S. Government Printing Office
"Basic Net Mending" 16mm, sound, 16 min., color
Pay return postage and insurance, book 3 months in advance. Group must have at least 25 people.
National Oceanic and Atmospheric Administration, U. S. Dept. of Commerce, Motion Picture Service, 12231 Wilkens Ave., Rockville, MD 20852
"By Nature's Rule" (S-146) 16mm, color, sound, 27 min., junior high and above. Pay return postage, book 10 weeks

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Fishing (p. 2)

Objective(s):

Procedure:

What are the different types of fishing and what type do you want to do?
- a. Still fishing
- b. Bait casting
- c. Spinning
- d. Fly casting
- e. Trolling
- f. Career - guide for fishing parties

Who can go fishing?

Who has to have a fishing license and where do you buy them, and what is the legal limit?

Career
- a. Be representative who sells licenses
- b. Work in conservation department
- c. Work in license bureau

Why would the students want to go fishing?
- a. Recreation and hobby
- b. Fresh air and sun, etc.
- c. To forget worries and relieve tensions
- d. Joy of competition

Where can people go fishing?

Each student could plan a fishing trip and present information on it to other classmates.

Resources and Materials:

in advance. Association-Sterling Films, 8615 Director's Row, Dallas, TX 75247

"A Fisherman's Notebook" 16mm, color, sound, 13 1/2 min. (1964) Pay return postage, book 2 months in advance. Aetna Life & Casualty, Public Relations & Advertising Dept., Film Library, 151 Farmington Ave., Hartford, CT 06115

Have a man from the Conservation Department come into class and give a talk.

"Fishing, Luck or Logic" 16mm, color, sound, 30 min. (1961) Pay return postage by parcel post. Book 6 months in advance. Wright & McGill Co., 4245 E. 46th Ave., Denver, CO 80216

"Let's Go" (A 'How to Fish' film) 16mm, color, sound, 20 min. (1973) Pay postage one way, book 2 months in advance. Picadilly Films International Co., Ltd., Box 16255, Lapham Station

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Fishing (p. 3)

Objective(s):

Procedure:

What are some other careers involving fishing activities?

Interested students could research areas such as work in resort areas, conservation, fish hatcheries, etc.

Resources and Materials:

San Antonio, TX 78246
"How To Improve Your Fishing"
A series of six filmstrips, in full color, sound by 33 1/3 rpm disc.
"Fun & Fascination of Fishing"
"Hook & Line Fundamentals"
"Casting Fundamentals"
"If You Were a Fish"
"Let's Go Fishing"
"Fly Casting Fundamentals"
Running time for series 1 hour, 45 minutes. Pay return postage via parcel post, book well in advance. American Fishing Tackle Manufacturers Assn., Film Comm., 208 South LaSalle St., Chicago, IL 60604

Evaluation:

A written test could be given and/or students could demonstrate abilities in areas such as casting.

Comments on use:

If possible, actual experience is the best activity for this unit.

Louella Kay Byers

Subject Area(s) Physical Educ

Unit(s) Hiking

Objective(s):

The student will learn the fundamentals of hiking.
The student will learn about a possible avocational area that might be enjoyed.

Procedure:

The following areas should be covered:

What does a person need to go hiking?
- a. Comfortable shoes
- b. Heavy wool socks
- c. Warm clothing
- d. Pack

Bring in--or have students bring--samples of appropriate items.

Who can go hiking?

Why do people hike?
Have a hiker come to class to speak.

What are some safety rules for hiking?

What can students learn from hiking?
- a. Learn about nature
- b. To "get away"
- c. To release frustration

Where can people hike?
Have students plan hiking trips in community or farther from their homes.

Resources and Materials

New Standard Encyclopedi
The Complete Walker by C
Fletcher
The First Book of Hiking
William Harrison
Scoutmaster's Handbook b
Scouts of America

Films: "The American Tr
16mm, color, sound, 28 m
(1968) Book well in adva
return five days after r
by parcel post. U.S. Bu
of Outdoor Recreation, F
Television Liaison Offic
Washington, DC 20240
"By Nature's Rule" (S-14
16mm, color, sound, 27 m
Pay return postage, book
least 10 weeks in advanc
Association-Sterling Fil
8615 Directors Row, Dall
75247
"Hiking" U.S. Bureau of
door Recreation

Have a person from a hik
organization or club com
the class and give a tal

Evaluation:

A written test could be given on safety rules, etc.

Comments on use:

If possible, take a class hike.

Louella Kay Byers

Subject Area(s) Physical Education

Unit(s) Individual or Lifetime Sports

Objective(s):

The student will learn fundamentals of sports that do not require getting up a team and, therefore, may more likely be participated in during rest of lifetime.

Procedure:

These areas would be covered in addition to actual experience in the sports:

How can students use the following lifetime sports in their future?

- a. Archery
- b. Bowling
- c. Golf
- d. Tennis
- e. Skiing

What equipment is necessary and the cost?
Someone working in the following areas could come in to present this for each area:

- a. Sales representatives
- b. Testing factories for new items
- c. Working in stores that sell equipment
- d. Working at sport facilities

Are there any facilities in their community to play these sports?

Career--working at these sport facilities--could be researched by interested students.

Are there any jobs in these sports?

Students would probably be interested in interviewing pros in any of these areas.

Resources and Materials:

Physical Education Activities Handbook by Dennis K. Stanley
Archery by Roy K. Niemeyer
Bowling by Joan Martin
Bowler's Manual by Lou Bellisimo
Tennis by The Division for Girls' and Women's Sports

Films: "Fun on the Lanes" 8mm, sound, black & white, 17 min. (1965)
American Junior Bowling Congress, 5301 S. 76th St., Greendale, WI 53129
Pay return postage, book 3 weeks in advance.
"Wonderful World of Bowling" 16mm, color, sound, 20 min.
Pay return postage, book 4 weeks in advance. Return 7 days after arrival by parcel post. Miller Brewing Co., Film Library, 4000 W. State St., Milwaukee, WI 53208
"ABC Tournament Story" 16mm, black & white, sound, 25 min.
Pay return postage. Brunswick

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Individual and Lifetime Sports
(p. 2)

Objective(s):

Procedure:

Are there any jobs in fields related to the activities?

- a. Golf caddies
- b. Linesmen
- c. Do workshops
- d. Managers
- e. Owners
- f. Recreational centers
- g. Sports broadcasters
- h. Teachers--give lessons
- i. Work in sporting goods stores or pro shops
- j. Work on sports magazine staff
- k. Umpires

Students could research, make collages, invite guest speakers, or do various other activities in this area.

Resources and Materials:

Division, Film Librarian, 69 W. Washington St., Chicago, IL 60602

"New Horizons" 16mm, sound, color, 20 min. Pay return postage. Brunswick Corporation

"Who's Keeping Score?" 16mm, color, sound, 20 min. Pay return postage. Brunswick Corporation

"High Life Golf Hints" 16mm, sound, color, 15 min. Pay return postage, book 4 weeks in advance. Miller Brewing Co.

"PGA Golden Anniversary Championship" (1966) 16mm, color, sound, 27 min. Pay return postage. Association Films, Inc., 600 Madison Ave., New York, NY 10022

"All-Star Golf Tips" 16mm, black & white, sound, 26 min. Book 2 months in advance, pay transportation charges. Reynolds Metals Co., Motion Picture Dept., P.O. Box 2346, Richmond, VA 23218

"Ice Rescue" 16mm, black & white, sound, 4 1/2 min. Pay return

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Individual and Lifetime Sports (p. 3)

Objective(s):

Procedure:

Resources and Materials:
postage. American National Red Cross.
"Winter Wonder--New York State" 16mm, color, sound, 14 1/2 min. Pay return postage.
New York State Dept. of Commerce, Film Library, West Mall Plaza, 845 Central Ave., Albany, NY 12206
"Here's Skiing" 16mm, color, sound, 7 min. Pay return postage, book 2 weeks in advance. Radim Films, Inc., 220 West 42nd St., New York, NY 10036
"The Big Mountain of Fun" 16mm, color, sound, 22 min. Pay postage. Modern Talking Picture Service, 1212 Ave. of the Americas, New York, NY 10036

Write to:
American Tennis Assn., P.O. Box 1139, Danville, VA 24541
United States Lawn Tennis Assn., 51 E. 42nd St., New York, NY 10017

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Individual and Lifetime Sports (p. 4)

Objective(s):

Procedure:

Resources and Materials:

U.S. Professional Tennis Assn., P.O. Box 145, Wakefield Station, New York, NY 10466
American Bowling Congress, 1572 E. Capitol Drive, Milwaukee, WI 53211
Manhattan Rubber Division of Raybestos, Bowling Ball Dept., 611 Willett St., Passaic, NJ 07055
American Junior Bowling Congress, Public Relations Dept., 1572 E. Capital Drive, Milwaukee, WI 53211
Professional Golfer's Assoc. of America, Box 12458, Palm Beach Gardens, Lake Park, FL 33403
U.S. Golf Assoc., 40 E. 38th St., New York, NY 10016
Ice Capades, 6121 Santa Monica Blvd., Hollywood, CA 90038
Ice Follies, 1001 N. LaBrea Ave., Los Angeles, CA 90038
Ski Area Operator's Assn. Otis Ridge, Otis, MA 01253
U.S. Ski Assn., The Broadmoor, Colorado Springs, CO 80906

Evaluation:

Knowledge of fundamentals and skills can be tested.

Comments on use:

Louella Kay Byers

Subject Area(s) Physical Education

Unit(s) Swimming

Objective(s):

The student will learn the fundamentals of swimming.
The student will learn about related occupations.

Procedure:

The following areas should be covered:

Who is swimming for?
Someone from the American Red Cross could come to speak to the class.

Why do people swim?
- a. Recreation
- b. Exercise
- c. Safety around water

What are some safety rules to follow?
A speaker from the American Red Cross could cover this area.

What are some career related activities?
- a. Design and build pools
- b. Designer of bathing suits
- c. Lifeguard
- d. Racing
- e. Salesman that sells chemicals to pool
- f. Swimming instructor
- g. Synchronized swimming
- h. Work for Red Cross
- i. Water ballets
- j. Work in different camps or country clubs
- k. Work in sporting goods store selling equipment

Resources and Materials:

Swimming and Diving by American Red Cross
Basic Swimming Analyzed by Marjorie M. Harris
Swimming by John A. Torney
Drownproofing by Fred R. Lanoue
Easy Steps to Safe Swimming by Evelyn McAllister
Swimming and Water Safety by American Red Cross
Lifesaving and Water Safety by American Red Cross
Young Sportsman's Guide to Swimming by Lynn Burke and Don Smith
Official NCAA Swimming Guide
Aquatics Handbook by B. W. Barbrielsen
Swimming Pool Weekly

Films: "Aquatic School" 16mm, sound, color, 16 1/2 min. (1969) American National Red Cross, local chapter

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Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Swimming (p. 2)

Objective(s):

Procedure:

l. Work at a pool concession stand
m. Work for health department (goes around and makes sure pools are clean and meet state requirements)
n. Work at a YMCA

Students could do various activities in areas of interest.

Resources and Materials:

"From Where I Sit" 16mm, sound, color, 18 min. (1970) American National Red Cross

"Swim and Stay Fit" 16mm, sound, color, 4 1/2 min. (1963) American National Red Cross

"Be Water Wise--Swimming" (TF 1-5192a) 16mm, sound, color, 25 min. (1960) Book 3 weeks in advance. Department of the Air Force (local air base) or Air Force Central Audiovisual Library, Aerospace Audiovisual Service, Norton Air Base, CA 92409

"Be Water Wise" 16mm, color, sound, 13 1/2 min. American National Red Cross (local)

"Heads Up" 16mm, black & white, sound, 24 min. Pay return postage. American National Red Cross

"Importance of Selling" 16mm, black & white, sound, 20 min. Encyclopedia Britannica Educational Corp., Public Relations Department, 425 N. Michigan Ave., Chicago, IL 60611

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Swimming (p. 3)

Objective(s):

Procedure:	Resources and Materials:
	"Swimming Pool Sanitation" 35mm, color, sound, 66 frames (filmstrip) Pay return postage, book one month in advance. U.S. Public Health Service, National Communicable Disease Center, Atlanta, GA 30303 "Drownproofing" 16mm, sound, color, 10 min. (1967) Pay return postage, book two months in advance. Telefilm Ltd., P.O. Box 709, Homosassa Springs, FL 32647 Write to: Hoffman Publications, P.O. Box 4172, Fort Lauderdale, FL 33304 National Swimming Pool Institute, 2000 K St., N.W., Washington, DC 20006 Pool News (National trade magazine) General Publications, Ltd., 3923 W. Sixth St., Los Angeles, CA 90005 National Recreation and Park Association, 1700 Pennsylvania

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Swimming (p. 4)

Objective(s):

Procedure:

Resources and Materials:

Avenue, N.W., Washington, DC 20006
Aquatic Forum, 2109 40th St., Des Moines, IA 50310
Council for National Cooperation in Aquatics, 1201 16th St., N.W., Washington, DC 20036

Evaluation:

Written and/or skill test.

Comments on use:

Louella Kay Byers

Subject Area(s) Physical Education

Unit(s) Team Sports

Objective(s):

The student will see the value of cooperation in team sports.

Procedure:

Cover the following areas in relation to these team sports:

What can students learn from the following sports?

a. Basketball
b. Field hockey
c. Soccer
d. Softball
e. Speedball
f. Volleyball

Include ideas of cooperation, coordination, and physical fitness.

How can the students apply the principles or ideals of these sports to everyday living?

In what jobs does physical fitness play a part and why should people keep physically fit?

What jobs are available for students to go into if they are good in these sports?

Take a field trip to a professional game or tour the facilities.

Resources and Materials:

Physical Education Activities Handbook by Dennis L. Stanley
Team Sports for Girls and Women by Meyer and Schwarz
The Physical Education Curriculum by W. M. Ralph LaPorte
Women's Basketball by Mildred Barnes
Soccer-Speedball by The Division for Girls' and Women's Sports
Volleyball by the Division for Girls' and Women's Sports
Physical Education by Karl W. Bookwalter
Physical Education by John E. Nixon
Occupational Outlook Handbook
Intramuals: Programming and Administration by Pat Mueller

Films: "Basketball-Defense" 16mm, sound, 11 min. (1959)
"Basketball-Defensive Drills" 16mm, sound, 11 min. (1967)
"Basketball-Individual Offense" 16mm, sound, 11 min. (1957)
"Basketball-Team Offense" 16mm, sound, 11 min. (1958)

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Team Sports (p. 2)

Objective(s):

Procedure:

What jobs are available for students who are interested in the sport but are not good enough to play it as a professional?

a. Assistant coaches
b. Assistant managers
c. Coaches
d. Linesmen
e. Community Recreation
f. Managers
g. Officials
h. People to coordinate activity
i. Public relations (advertising)
j. Sports broadcaster or announcer
k. Equipment
    1. Sales representatives
    2. Salesmen
    3. People who repair equipment
l. Scouts
m. Sports directors
n. Sports reporters
o. Team physician
p. Trainers
q. Umpires

Students might want to do a special project in an area of interest.

Where can students play these sports as a recreational activity?

Resources and Materials:

"Basketball-The Fast Break" 16mm, sound, 11 min. (1961)

"Conditioning Drills" 16mm, sound, black & white, 11 min. (1969)

"Pressure Team Defense" 16mm, sound, 11 min. (1972)

"Baseball-Batting and Bunting" 16mm, sound, 11 min. (1960)

"Baseball-Hitting A Baseball" 16mm, sound, 11 min. (1965)

"Baseball-Pitching" 16mm, sound, 11 min. (1962)

All above films from: Coca-Cola Co., available from participating bottlers of Coca-Cola. Book 4 weeks in advance, return by parcel post.

"Name of the Game is Basketball" (3672) 16mm, sound, color, 28 min.) Pay return postage, book 1 month in advance.

"Name of the Game Is Baseball" (3183) 16mm, sound, 28 1/2 min., color. Pay return postage, book 1 month in advance.

"Name of the Game Is Hockey" (4805) 16mm, color, sound, 28

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Team Sports (p. 3)

Objective(s):

Procedure:

Have students develop a list of possibilities in the community--teams, leagues, etc.

What equipment would be necessary?
Have students set up a team of choice and compile a list of the necessary equipment and cost.

Resources and Materials:

min. Available for 7th grade and up. Modern Talking Pictures, 1686 Elmhurst Road, Elk Grove Village, IL, Chicago, IL 60007

"Baseball-Tips on Baseball" 16mm, black & white, sound, 11 1/2 min. Coca-Cola U.S.A. Available from Coca-Cola bottler nearest you.

"Fifty Years of Baseball Memories" 16mm, black & white, sound, 30 min.
American & National Leagues of Professional Baseball Clubs, Motion Picture Department, 200 S. Michigan Ave., Chicago, IL 60604

"Health--You and Your Helpers" 16mm, color, sound, 11 min.
Dept. of Audiovisual Extension, General Extension Division, University of Minnesota, 2037 University Ave., S.E., Minneapolis, MN 55455

"The Fitness Challenge" 16mm, color, sound, 28 min. Modern Talking Picture Services, 2323

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Team Sports (p. 4)

Objective(s):

Procedure:

Resources and Materials:

New Hyde Park Road, New Hyde
Park, NY 11040
"Infield Play" 16mm, sound,
color, 14 1/2 min.
Pay return postage & insurance,
book 4 weeks in advance.
Planters Peanuts, Arthur
Makin Prod., Inc., 17 West
60th St., New York, NY 10023
"The Science of Hitting"
(G-278) 16mm, sound, color,
28 min. Pay return postage,
book 10 weeks in advance.
Association-Sterling Films,
8615 Directors Row, Dallas,
TX 75247
"Mayhem On A Sunday Afternoon"
16mm, black & white, sound,
60 min. Pay return postage,
book 3 months in advance.
3-M Film Lending Service
220-6W, 2501 Hudson Road,
St. Paul, MN 55119
"The Linebacker" 16mm, black
& white, sound, 11 min. nearest
Coca-Cola Bottling Co.
"Why Exercise" 16mm, color,
sound, 14 min. Pay a fee and

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Team Sports (p. 5)

Objective(s):

Procedure:	Resources and Materials:
	return postage. Dept. of Audiovisual Extension "Hi Lites" 16mm, black & white, sound, 40 min. National Collegiate Film Service, 1030 West Chicago Avenue, Chicago, IL 60622 "Hockey--Where the Action Is" 16mm, color, sound, 24 min. (1974) Pay postage and insurance, book 2 months in advance. West Glen Films, 565 Fifth Avenue, New York, NY 10017 "Fundamentals of Diet" 16mm, black & white, 11 min., sound, rental fee "Weight-Training--Basic Exercises" 16mm, black & white, 10 min., sound, rental fee. Encyclopedia Britannica Educational Corporation, Public Relations Dept., 425 N. Michigan Ave., Chicago, IL 60611

Evaluation:

Comments on use:

Subject Area(s) Physical Educati

Unit(s) Team Sports (p. 6)

Objective(s):

Procedure:

Resources and Materials:

Write to:
American Medical Assn. Dep
of Health Education, 535 N
Dearborn St., Chicago, IL
The Athletic Institute, 80
Merchandise Mart, Chicago,
IL 60654
National Recreation Assoc.
8 West Eighth St., New Yor
NY 10011
U.S. Dept. of Health, Educ
tion & Welfare, Office of
Education, Washington, DC
20202
The National Collegiate At
Bureau, Box 757, Grand Cen
Station, New York, NY 100
National Basketball Assoc.
Empire State Building, New
NY 10001
American Basketball Assoc.
S. 6th St., Minneapolis, M
The National Association o
Leagues, Umpires & Scorers
Box 1420, Wichita, KS 672
Al Somers School for Umpir
P.O. Box 2041, Daytona Bea
FL 32014

Evaluation:

Comments on use:

Subject Area(s) Physical Education

Unit(s) Team Sports (p. 7)

Objective(s):

Procedure:

Resources and Materials:

National Collegiate Athletic Assoc., Midland Building, Kansas City, MO 64105

National League of Professional Baseball Clubs, 2601 Carew Tower, Cincinnati, OH 45202

American League of Professional Baseball Clubs, 520 Boylston St., Boston, MA 02116

National High School Athletic Coaches Assn., 1421 Mayson St., S.E., Atlanta, GA 30324

National Assn. of College Gymnastic Coaches, San Jose State College, San Jose, CA 95128

Evaluation:

Evaluate team participation during participation.

Comments on use:

Louella Kay Byers

SCIENCE

Subject Area(s) Science

Unit(s) Oceanography and/or geology

Objective(s):

To relate the past to the present.
To become acquainted with occupations related to oceanography and/or geology.

Procedure:

Examine various layers of a core sample and discuss how layers were formed.

Discuss oil drilling, dam building, whatever relates to source of core sample. Then can go into other related areas.

Resources and Materials:

Core sample (Ours was obtained from the Corps of Engineers--could also check with drilling company or any excavation project or obtain a picture to use.)

Microscope
Slides

Evaluation:

Comments on use:

Jim Armes

Subject Area(s) Science

Unit(s) Meteorology

Objective(s):

To learn what a meteorologist does.
To increase individual understanding of the weather.

Procedure:

Weather station approach. Have student or small group keep the weather picture for a week or longer.

Resources and Materials:

Anemometer
Hygrometer
Weather maps (U.S. Dept. of Commerce)
Barometer
Rain gauge

Evaluation:

Daily evaluation of student's record book--test.

Comments on use:

Jim Armes

Subject Area(s) Science

Unit(s) Genetics and/or care of animals and plants

Objective(s):

To show how traits are inherited.
To show what a geneticist does by research.

Procedure:	Resources and Materials:
Raise genetic corn to determine ratios of genotypes and phenotypes.	Albino corn Indian corn Plant pots
Raise fruit flies. Use distinguishing features to study genotypes and phenotypes.	Drosophila Drosophila medium
Lead into discussion of personal traits and careers related to genetics.	Lab Aid Kits (Carolina Biological Supply) and others have kits available.

Evaluation:

Lab reports--test over material.

Comments on use:

Jim Armes

Subject Area(s) Science

Unit(s) Bacteria

Objective(s):

To experience type of work done by a clinical bacteriologist.
To become aware of unseen bacteria that is present.

Procedure:

Using sterile agar, place a finger on the agar and incubate it for 24 hours at 37°C. Use a control (a clean sterile petri dish of agar).

Can be done by leaving it in open air.

Resources and Materials:

Agar
Petri dishes
Incubator

Bacteria cultures can also be ordered--to be compared.

Evaluation:

Report on experiment.

Comments on use:

Jim Armes

Subject Area(s) Science

Unit(s) Conservation

Objective(s):

To see the length of time necessary for a tree to grow to maturity.
To understand the necessity for conservation.

Procedure:

Determine the age of a tree from a wood borer sample by counting the annual rings. Also show periods of drought or heavy rainfall by width of the rings.

Resources and Materials:

Wood borer

Conservation agent will come to school to do this; can also answer students' questions about occupation.

Evaluation:

Comments on use:

Jim Armes

Subject Area(s) Science

Unit(s) Blood

Objective(s):

To type blood.
To learn about occupations related to science.

Procedure:	Resources and Materials:
Red blood cell count. White blood cell count. Differential white cell count.	Hemacytometer Cover glass Blood lancets Alcohol pads Slides
Blood Typing a. Blood type b. Rh factor	Lancets Alcohol pads Slides
Discussion of related occupations such as lab technician, medical technologist.	Resource people from these areas could be invited to help students with experiment and answer any questions students might have.

Evaluation:

Comments on use:

Works fine in 10th grade biology.

Jim Armes

Subject Area(s) Science

Unit(s) Forestry

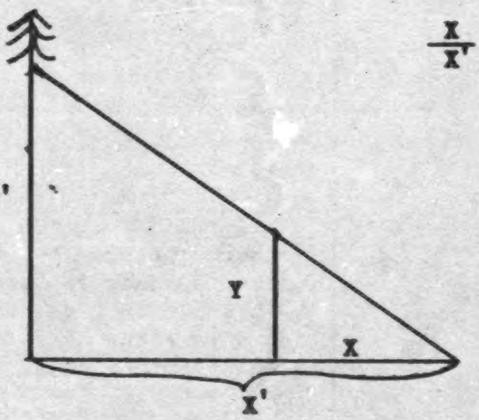
Objective(s):

To become aware of various aspects of forestry.

Procedure:

Determination of salable lumber in a tree. Use of congruent triangles to determine height.

$$\frac{X}{X'} = \frac{Y}{Y'}$$



X' can be measured by simply stepping it off.

Resources and Materials:

Chart on board feet
Meter or yardstick

Field Study Manual for Outdoor Learning
Burgess Publishing Company
426 S. Sixth Street.
Minneapolis, MN 55416

Evaluation:

Students can compare answers to see how close they are--would, however, probably be used to introduce unit on forestry or section of unit on ecology.

Comments on use:

Jim Armes

Subject Area(s) Science

Unit(s) Physiological Function

Objective(s):

To become aware of individual strengths and limitations and how individuals differ.

Procedure:

Human reaction-time. Have student hold the thumb and forefinger of their hand an inch apart. Place the ruler vertically above the hand with the distal end even with the top of the hand. Drop the ruler and record where in inches or meters the student catches the ruler. Compare with other students. Discuss.

Have students conduct same experiment with parents and brothers and sisters.

Chart results using comparison by age and by sex.

Follow with discussion on individual strengths and weaknesses, differences. Also, in which situations/occupations would reaction time make a difference.

Resources and Materials:

Ruler or meter stick.

Evaluation:

Mainly on class participation.

Comments on use:

Jim Armes

Subject Area(s) Physical Science

Unit(s) Home Safety - Fires

Objective(s):

To become aware of importance of fire extinguishers and how to use them.

Procedure:

Demonstration of various types of fire extinguishers. Stress which type to use on various kinds of fires.

Survey to find out how many students have such equipment at home. Might extend this to cover other students.

Resources and Materials:

CO_2 fire extinguishers
Soda - acid fire extinguisher
ABC type fire extinguisher
Waste basket
Chemicals (flammable)
Paper
Cloth

Evaluation:

Test over material.

Comments on use:

Jim Armes

Subject Area(s) Biology

Unit(s) Ecology

Objective(s):

To have students become aware of the effects of pesticides, population growth, packaging, etc., in their daily life.

Procedure:

Have student(s) read Silent Spring by Rachel Carson, Population Bomb by Paul Erlich, or some other appropriate work. Have students then discuss the implications.

Resources and Materials:

Books, pamphlets, articles on pesticides, etc.
A crop duster could be invited to speak in conjunction with this activity.

Evaluation:

This could be done as extra project by those students interested and graded on their presentation to the class.

Comments on use:

Jim Armes

Subject Area(s) Biology

Unit(s) Plant diseases

Objective(s):

To become aware of how biology relates to various occupations.
To become aware of how plants are important in daily life.

Procedure:

Have students write reports on various aspects of plant diseases and tell how each of the following occupations are related:

Entomologist
Mycologist
Bacteriologist
Parasitologist

Resources and Materials:

Reference material on plant diseases
Entomologist
Mycologist
Bacteriologist
Parasitologist.

Evaluation:

Comments on use:

Jim Armes

Subject Area(s) Biological Scien

Unit(s) Multicellular Plants

Objective(s): To identify local plant varieties. To identify, collect, and catego common plants. To learn of careers involving a knowledge of plants. To observe pla species that are no longer common in most of the state. To gain insight into techn of mass plant propagation. To observe and record the effects that burning has on w and grass populations. To observe measurable differences of varying fertilizers on plant growth. To learn of plant propagation techniques. To learn the basic techni of culturing, collecting, and experimenting with algae.

Procedure:	Resources and Materials:
Field trip to a local nursery.	Local nursery
Field trip to a local pond, lake or stream to locate plant varieties being studied.	Nearest pond, lake or strea
Class visitation by any of the following: forest ranger, soil conservationist, State Dept. of Conservation representative, local horticulturalist or member of local flower and shrub club.	State Dept. of Conservation Local Chamber of Commerce
Class visitation of a nearby local, state, or federally controlled lands.	State Dept. of Conservation
Visit a college greenhouse and botanical gardens.	Nearest college or botanica gardens
Conduct plant population density surveys of both burned and unburned grass field.	School eco-area Along railroad tracks that annually burned
Conduct plant growth experiments by varying amounts of fertilizers.	School eco-area Classroom plant beds
Attempt to multiply plants by cutting bulbs, roots, tubers, and, runners.	Biology text Bulbs, roots, tubers, runne
Collect, culture, and experiment with algae.	Turtox leaflet #6 Stong, The Amateur Scientis Ward's Culture Leaflet #14

Evaluation:

Comments on use:

Subject Area(s) Biological Science

Unit(s) Multicellular Plants, p. 2

Objective(s): To become familiar with the structure and function of mosses and liverworts. To experience growing a tiny flowering plant in the small area of a test tube. To be introduced to the fascinating "flesh eating plants."

Procedure:	Resources and Materials:
Grow and study mosses and liverworts.	Turtox leaflet #25
Grow the tiny, flowering duckweed in test tubes.	School suppliers--duckweed
Collect, feed, and study insectivorous plants.	Turtox leaflet #18

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Biological Science

Unit(s) Microbiology

Objective(s): To list the basic similarity and dissimilarities of the microbiology categories. To learn of effects on foods and microorganism reproduction when heated. To observe the regeneration ability of the planaria and try to list how regeneration is possible. To observe the effect that hormones can have on this "half plant, half animal," the Euglena. To observe culturing techniques that are required of all hospital lab personnel. To learn of the career opportunities and work done by the mycology expert. To grow mushrooms, study their structure, and make spore prints. To set up a terrarium and propagate lichens.

Procedure:	Resources and Materials:
Students will visit a library to become familiar with microbiology topics; virus, bacteria, the protozoans, fungi, and algae.	Locate library or school library if adequate
Culture microorganisms by exposing both raw and cooked foods to the open air environment.	Turtox leaflet #62
Set up a regeneration experiment with the planaria.	School supplier or stagnant water (planaria)
Experiment with the effects of hormones on growth of Euglena.	D. E. Beutow, Research Problems in Biology, No. 92
Visit a hospital lab to observe specimen culturing techniques and cultures.	Nearest hospital laboratory
Research topic on the science of mycology.	Local library and/or professional readings
Collect mushrooms.	Most semi-wooded areas or meadows in spring
Collect lichens and maintain in a terrarium.	Turtox leaflet #25

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Biological Science

Unit(s) Human Biology

Objective(s): To become aware of biology related occupations in the community as well as define specific biology topics. To learn of the sources of their own characteristics and of the multitude of characteristics they possess. To become aware of the similarity of mate selection in all animals, including humans. To distinguish identical and fraternal twins. To learn of both recent and early discoveries of anthropological and archaeological remains. To understand eugenics through an oral presentation. To correspond digestion time with various food groups.

Procedure:	Resources and Materials:
Class to define human biology areas after group consultation, library usage, and community job identification exercise.	Survey local biology related occupations
Each student to construct a family pedigree or family tree of physical characteristics.	Family members Picture albums Community historical society
Visit a local registered animal breeder for registration importances and procedures.	Local animal breeder
Examine and photograph both identical and fraternal twins.	Local photo studio or solicit photos from community
Visit the anthropology exhibits in the local museums. Follow with student reports and/or class discussion.	Nearest museum
Visit and observe an archaeological site.	Check nearest museum for existence of dig sites State archeological society
Student report on eugenics.	Local librarian
Illustrate body digestion by the use of dilute HCl on various food substances.	Household foods HCl from school supplier
Study food preservatives and their possible toxicity by experimenting with various salt and sugar	Food and Drug Adm.

Evaluation:

Comments on use:

Subject Area(s) Biological Science

Unit(s) Human Biology, p. 2

Objective(s): To learn of possible harmful effects on the body through study of food preservations. To learn how ph, time, temp., and dilution can affect digestion. To observe the similarity of the mammal circulatory systems and compare with the human. To type blood, how to interpret the clotting, and learn their own blood type. To compare their own rate and strength of heart beat to other classmates. To distinguish arteries from veins. To learn of circulation through their own constructed model.

Procedure:	Resources and Materials:
concentrations on both plant and flesh.	
Test the effects of ph, time, and of dilution of digestive enzymes on food digestion.	Biology and/or chemistry teacher
Dissect various preserved animals, such as frog, pig, or cat circulatory systems and compare with models of the human systems. Student report and/or class discussion to precede and follow.	School supplier and state Heart Association
Health nurse to instruct and administer blood typing and clotting demonstration.	Local health nurse
Students to investigate their own heart beat and pulse with use of stethoscope and sphigmomanometer.	Witherspoon, "The Living Laboratory" School supplier
Obtain arteries and veins from a butcher and use them for dissection and study thickness, structure, [illegible] pressure and valves.	Local butcher or school supplier
Construct a circulatory model.	Thomas Marx, "Circulatory Model," NSF report

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Biological Science

Unit(s) Ecological Conservation

Objective(s): To evaluate the ratio and types of soil animals present in each of the soil areas. To understand the composition and plant and animal diversity found on a soil plot. To develop a possible life-long hobby or profession as well as become aware of nature's variety. To relate ecological succession to more than a definition. To be introduced into the vast field of ornithology, the study of birds. To observe the relationship between population growth and food supply. To obtain experience in community balance and adjustments. To be introduced to the study of water communities by

Procedure:	Resources and Materials:
Take soil samples and slowly heat to drive insects, bugs, and worms to the top of the sample container.	Use metal containers on various soil samples
Study the physical, chemical, and biological properties of a plot of soil.	School eco-area of school area
Take field trips to various biological communities to learn their plants and animals.	School eco-area Local farms or wood lots State conservation reserves City parks Local Aubudon Society and nature clubs
Organize and conduct an ecological succession experiment.	Lawson and Paulson, Laboratory & Field Studies in Biology
Locate and observe galls on the common goldenrod plant.	Most fields or meadows
Set up bird feeding stations in various localities for population studies and specie identification.	State Cons. Commission Local bird watchers club State Ornithology Association
Choose a small organism, such as hydra, to study the ecological problem of population growth and food supply.	"Research Problems in Biology," Series 3, #94, Richard A. Edgren.
Set up a micro-community in a test tube, consisting of a plant and a snail.	Delbert E. Meyer, Am. Biology Teacher, March 1968, p. 193

Evaluation:

Comments on use:

Subject Area(s) Biological Science

Unit(s) Ecological Conservation, p. 2

Objective(s): scuba diving. To be introduced to the tasks of the state water purification commission, techniques of bacterial detection, and to positive and negative aspects of bacterial growth. To observe the body's ability to destroy foreign tissue and the affect its own tissue plays in transplants. To compare and contrast the needs of man and of our natural environment for preservation of both. To become more aware of both the pressures and the actions taken by citizens and the courts in preserving resources. To see conservation relevance by application to their local environment.

Procedure:	Resources and Materials:
Visit a scuba diving instructor for demonstration of a technique to study water communities.	Local scuba diving instructor
Analyze the bacterial content of milk and water samples.	Local water State pure water commission
Use mice to investigate immune reactions to skin grafts and tissue transplants.	College lab of research Medical research journals
Visit a state or national forest, wildlife refuge, fish hatchery, woodlot, fire lookout tower, or dam. Follow with student reports.	Nearest school eco-area, federal, or private lands that are for school use
Investigation and report on federal laws and current activities in the field of conservation.	Supt. of Documents, Washington, DC, "Restoring the Quality of Our Environment," 1969 Federal Fish and Wildlife Bureau, Washington, DC
Investigate state and local conservation programs and personnel.	State Conservation Commission

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Biological Science

Unit(s) Heredity and Genetics

Objective(s): To become more aware of their own hereditary strengths and weaknesses when seeking employment. To become aware of the services and job specifications of a soil conservation official. To learn of horticultural techniques, laws affecting plant importation, and of the life of a nursery keeper. To learn of seed hybridization techniques of advantages of using hybrids, and of economic advantages of hybrids. To become aware of the jobs involved and standards required in operating an agricultural seed company. To be able to identify the physical qualities and techniques of cross-pollination.

Procedure:	Resources and Materials:
Guest speaker from the Employment Security Office to discuss physical and mental differences in job applicants.	Nearest office
Guest speaker from the Soil Conservation Service to discuss their services.	Local Soil Conservation Dept.
Visit a tree nursery and greenhouse.	
Guest speaker representing a local seed dealer to discuss hybrid varieties and disease resistant varieties of seeds.	Nearest seed dealer College geneticist School agriculture instructor
Visit an agricultural seed company to observe selection, protein analysis, bagging, and shipping techniques of a large company.	
Visit an experimental plot of hybrid plants to discuss physical qualities of the varieties and of the purpose of cross-pollinations.	Nearest experimental plot and use its manager for resource
Library visitation and assignment on the experiments of Gregor Mendel and other early selected geneticists.	Local or college library
Visit a local fruit orchard to learn of new varieties of fruit, their blight resistance, desirability for eating or cooking, and of long range plans that the grower must envision to remain in business.	Nearest fruit orchard owner

Evaluation:

Comments on use:

Subject Area(s) Biological Science

Unit(s) Heredity and Genetics, p. 2

Objective(s): To see relevant and applicant experiments by early geneticists that can be applied to present and future genetics problems. To obtain insight into the job of the fruit grower and of his future needs and plans. To become aware of both advantages and disadvantages of owning and raising registered animals, as well as registration requirements.

Procedure:

Visit a local animal breeder to discuss pedigree and qualities of registered animals.

Resources and Materials:

Local animal breeder
Local dog kennels
Veterinarian
An owner of registered animals

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Biological Science

Unit(s) Vertebrate Biology

Objective(s): To become familiar with vertebrates in their immediate environment. To journey into both a biologists major lab and the home of all nature to learn of, collect, and identify that "laboratories" specimens. To have a greater understanding of vertebrate similarity and contrast. To become familiar with the principles of hormonal balance and its role in reproduction. To become familiar with the operation of this body detector and of the skills required to interpret its data. To gain a knowledge of anesthetics and of the work of the anesthesiologist.

Procedure:	Resources and Materials:
Formulate a list of local (familiar) vertebrates and discuss their characteristics that make them a vertebrate.	Group discuss Individual student thought Various biology texts State wildlife atlas
Field trip to gather frog eggs and other vetebrate specimens.	Local pond, lake or environment area
Dissect fish, frog, etc. for extraction of pituitary hormone for future use in reproduction studies.	Local specimen source or school suppliers
Inject pituitary hormone into female fish, frogs, etc. to cause ovulation.	"Fertilization of the Frogs Egg," Rugh, Experimental Embryology
Visit a hospital lab for demonstration of the electroencephalogram. Students to follow with an outline of a series of simple investigations of the nervous system.	Local hospital
Test the anesthetic effects of menthol, choreton, and various alcohols on small invertebrates and vertebrates.	Local pharmacy, school supplier, student collected specimens
Dissect various vertebrate structures of both large and small vertebrates for comparison. (eye, ear, etc.)	Butcher shop or school supplier
Consult and visit an optometrist for information on eye anatomy, astigmatism, depth perception, and field of view. Follow with student reports or questions.	Local optometrist or eye surgeon

Evaluation:

Comments on use:

Subject Area(s) Biological Science

Unit(s) Vertebrate Biology, p. 2

Objective(s): To become familiar with anatomy and physiology of vertebrates and compare with human. To learn of the career opportunities in the field of vision and of many eye problems that they encounter. To learn of acuity principles, measurement and interpretation., To learn of hard bone tissue and of its elasticity when soft. To put previous anatomy into play when preparing and mounting a full skeleton.

Procedure:	Resources and Materials:
Obtain a Snellen E of A.M.A. eye chart and have the students measure their own visual acuity.	Local doctor or health nurse
Investigate bone structure by both sectioning and by soaking in 10% HCl until limp. (Chicken bones are excellent.)	Butcher shop or supermarket
Prepare and mount a skeleton (moderately large animal if possible).	Turtox leaflet #9

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Biological Science

Unit(s) Cell Structure and Processes

Objective(s): To become aware of hospital uses of the microscopes in human cell identification. To have a better understanding of normal cell processes, and the nature of cancer cell development. To become familiar with library usage and early experiments on cell discovery., To view various cell structures along with gaining confidence in making their own slides. To have greater awareness of cell structure and of current advances made by researchers with the electron microscope. To become better acquainted with the objectives and techniques of the American Cancer Society.

Procedure:	Resources and Materials:
Field trip to a hospital laboratory for cell identification and instruction with high power microscopes.	Local hospital or clinic
Class visited by county health nurse to discuss normal cells and cancer cells.	County health official "Aberrant Cells" Cancer Society Scientific Am. offprints
Library visitation by class to discover sources of information of cell types and of early discoveries made by former microbiologist.	Local library
Assign reports on microbiologist, following a library visitation.	Local library
Examination of a variety of plant and animal cells with a microscope; both commercially prepared and student prepared slides.	School microscope and good commercially prepared slides from a school supplier, such as Turtox, Chicago, IL
Class to visit a college optics department to view an electron microscope.	Nearest college or university with such a scope
Guest speaker from local chapter of American Cancer Society to discuss the work of the organization and importance of cell research.	Nearest chapter of American Cancer Society

Evaluation:

Comments on use:

Subject Area(s) Biological Science

Unit(s) Cell Structure and Processes, p. 2

Objective(s): To become aware of possible image distortion caused by extensive use of microscopes and of techniques to ensure quality microscope study. To become familiar with the use of a microtome and learn of the skills needed to operate it. To become aware of current cancer discovery and treatment techniques. To be able to make crude tissue sections with the use of the simplest of microtomes. To become familiar with both photography and of a method of preserving their observations. To take "plant-prints." To become familiar with techniques of culturing that are invaluable.

Procedure:	Resources and Materials:
Class to visit local optometrist to learn dangers and physiology of eye fatigue and proper care of microscope and other optics lenses to maintain quality.	Local optometrist
Class to visit a microtechnique laboratory.	Nearest college or other lab with a microtome
Get a glimpse into molecular biology and work of cancer researcher with film entitled, "Investment Into Life."	American Cancer Society
Make a nut-and-bolt microtome for tissue sectioning.	Leonard Krause, Am. Biology Teacher, November 1968
Take pictures through a microscope.	Turtox leaflet #56
Make nail polish replicas of leaf stomates and other microscopic objects.	Helen Forrest, Am. Biology Teacher, November 1962
Learn to do tissue culture.	D. J. Merchant, Handbook of Cell and Organ Culture, Burgess Publishers, 2nd ed., 1964

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Biological Science

Unit(s) Invertebrate Animals

Objective(s): To gain experience in proper care of specimens, as well as take an active part in worm propagation. To learn of both the "good and bad" of parasitic and nonparasitic worms. To gain a first-hand experience at identifying invertebrates from professional pictures before beginning himself on identification. To learn of natural habitats, collecting techniques and obtain dissection or experimental specimens. To assemble individual insect collection as a method of study and/or beginning hobbies and careers. To more fully understand life styles and variations in spiders by examining and preserving their webs.

Procedure:	Resources and Materials:
Build a worm-bed for propagation of various types of worms.	Berman, How to Dissect, Chapter 2
Have a local veterinarian speak to the class on parasitic and nonparasitic worms.	Local veterinarian or college parasitologist
Library exploration to locate sources on information and for pictures and drawings of all types of invertebrates.	Local city, school, and college libraries Magazines such as National Wildlife
Locate a murky pond and have students gather crayfish, worms, and other available invertebrates in their natural habitat for future observation and discussion.	Local shallow pond, lagoon or lake
Combine field trips and home assignments for collection and taxonomy of insects.	Turtox leaflet #1 and #34 Alexander B. Klots, "Directions for Collecting and Preserving Insects" Ward's Natural Science, Rochester, NY
Spray, mount, and preserve spider webs.	Comstock, Handbook of Nature Study
Construct an ant farm or farms of various types of ants.	Turtox leaflet #35

Evaluation:

Comments on use:

Subject Area(s) Biological Scien

Unit(s) Invertebrate Animals,

Objective(s): To become familiar with one of Nature's most sociable creatures: a
To be introduced into the financially and personally satisfying occupation of beek
To observe the behavior aspects used in behavior studies. To observe flight, soci
and behavior patterns, as well as begin to classify the birds into categories. To
explore work of a nature photographer. To have a better understanding of camera c
tion, film development, and also will introduce them to a local photographer for f
reference. To be acquainted with another method of specimen preserver.

Procedure:	Resources and Materials:
Guest speaker to talk on beekeeping and construction of hives.	Local beekeeper State Conservation Depart
Set up terrariums and aquariums (both marine and freshwater).	Local pet or department s or school supplier Turtox leflet #10, #23, &
Class to go on bird watching expedition. (Preferable in early morning or late evening.)	Nearest college ornitholo State Conservation Depart
Students to make pictorial collection of invertebrates that they find by the use of a camera.	Student's total environme
Local photographer to speak and demonstrate the proper care, use, and development of camera and film.	Local photographer or som known for photographic sk
Embed small specimens in plastic.	C. L. Stong's "The Americ Scientist," Scientific Am May 1961 Turtox leaflet #33

Evaluation:

Comments on use:

Rick Schreck

Subject Area(s) Chemistry

Unit(s) Food Additives

Objective(s):

To have student become aware of the additives in foods to improve appearance.

Procedure:	Resources and Materials:
Oranges would be used in a chromatography experiment. Oranges would be peeled and soaked in alcohol. The solution would be concentrated by evaporation using an electric hot plate. Spots would be placed on filter paper and placed spot end down in a beaker of ether on a suspended glass stirring rod. The student would watch as the components of the additives separate. Discussion of additives.	Alcohol Ether Filter paper (strips) Glass rod Beaker Hot plate Eye dropper or micropipette

Evaluation:

Report on experiment.

Comments on use:

Jim Armes

Subject Area(s) Chemistry

Unit(s) Elements - Metal

Objective(s):

To become aware of how various ores or minerals are assayed.

Procedure:

Flame tests for various compounds could be conducted to show how qualitative tests for certain elements are made.

Resources and Materials:

Chemical analyst could be invited to conduct experiments.
Spectrophotometer
Bunsen burner
Platinum loop
Various chemical compounds

Evaluation:

Report on experiment.

Comments on use:

Jim Armes

Subject Area(s) Chemistry

Unit(s) Filtration technique

Objective(s):

To have students become aware of how sugar is refined.

Procedure:

A filtration experiment would be set up to demonstrate that color may be removed from brown sugar by dissolving it in water and passing it through a funnel packed with charcoal (granulated). Use only about 50 ml of the brown sugar solution. Evaporate solution filtrate to dryness.

Resources and Materials:

- Brown sugar
- Charcoal
- Filter paper
- Distilled water
- Florence or erlenmeyer flasks
- Watch glass
- Refinery trip if can be arranged

Evaluation:

Comments on use:

Jim Armes

FIELD TRIP SITES
and GUEST SPEAKERS

GUEST SPEAKER AND FIELD TRIP SITE LISTING

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Adco	900 W. Main Sedalia, MO	Dr. Alexander	826-3300	Yes	1-6	9-12	No
Allstate Insurance Co.	4800 E. 63rd Kansas City, MO	Mr. John Irish	333-6800	Yes	20	11-16	No
American Electrical Industries	Highway 50 Sedalia, MO	Mr. Russ Woodyard	827-1712	Yes	30	6-12	Yes
Archias Floral Co.	4th & Park Sedalia, MO	Mr. Don King	826-4000	Yes	20	K-12	Yes
Artist	203 W. Jefferson Sedalia, MO	Ms. Thelma Hansen	886-8464	No	0	7-12	Yes
Attorney at Law	Cole Camp, MO	Mr. Pete Stelling	668-4858	No	0	0	Yes
Attorney at Law	Warsaw, MO	Mr. Edwin F. Brady	438-5116	Yes	4-5	9-12	Yes
Attorney at Law	Farmer's Savings Bank Marshall, MO	Mr. Larry McClure	886-6986	No	0	7-12	Yes
Ault's Skelly Station	1570 S. Kentucky Marshall, MO	Mr. Bob Ault	886-6792	No	0	7-12	No
B & E Market	1701 S. Kentucky Marshall, MO	Mr. Jim Dick	886-2188	Yes	30	3-12	No
Banges	78 S. Jefferson Marshall, MO	Ms. Dolly Kiser	886-3716	No	0	7-12	Yes
Banquet Foods	253 W. Marion St. Marshall, MO	Mr. Caton Martin	886-3301	Yes	20	4-9	Possibly
Benton County Enterprise	Warsaw, MO	Mr. Mahlon White	438-6312	Yes	4-5	9-12	Possibly
Benton County R-I School	Cole Camp, MO	Mr. Vergil Oglevie	668-4427	No	0	0	Possibly

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Benton County R-IX	Warsaw, MO	Dr. John Boise	438-7351	No	0	8-10	Yes
Benton County Sheriff's Dept.	Warsaw, MO	Mr. Robert Breshears	438-5252	Yes	5-6	9-10	Yes
Binghams Super Saver	La Monte, MO	Mrs. Bingham	347-5426	No	0	0	No
Body Shop	Cole Camp, MO	Mr. David Luetjen	668-3155	Yes	2-4	9-10	No
Bohling Grocery	Cole Camp, MO	Mr. E. G. Bohling		No	0	0	Possibly
Boonslick Regional Library	Sixth & Lamine Sedalia, MO	Ms. V. Corley	826-6195	Yes	20	K-9	Possibly
Borchers & Heimsoth	Cole Camp, MO	Mr. Ervin Borchers	668-4923	No	0	0	No
Bothwell Hospital Physical Therapy	Sedalia, MO	Ms. Nevin Almquist	826-8833	Yes	7-15	7-12	Yes
Bothwell Hospital	Sedalia, MO	Ms. Marie Nicholson	826-8833	Yes	20	12-16	No
Breech Academy - TWA	6300 Lamar Avenue Mission, KS	Ms. Mickey Holiday	842-4000	Yes	20	11-16	Yes
Brick Mason	RFD 3 Warsaw, MO	Mr. Lee Slavens	438-5360	No	0	0	Possibly
Broadway Car Wash	310 W. Broadway Sedalia, MO	Mr. Dale Arms	826-0375	Yes	25-30	1-12	No
Broadway Lanes, Inc.	2119 W. Broadway Sedalia, MO	Ms. Edith Simons	827-0404	Yes	Large	K-14	Possibly
Brown, McCloskey, Buckley	309 E. 5th St. Sedalia, MO	Ms. Mabel Glenn	826-7373	No	0	0	No
Business Mens Assurance	BMS Building Kansas City, MO	Ms. Almeta Wilcher	753-8000	Yes	20	11-16	No

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
C-B Shop	Cole Camp, MO	Mr. Dave Wordeman		Yes	4	9-12	No
C. W. Flower	219 S. Ohio Sedalia, MO	Mrs. Austin	826-3200	Yes	15-20	11-16	Yes
Cablevision, Inc.	600 S. Osage Sedalia, MO	Mr. Lynn Harrison	826-0933	Yes	20	5-9	Possibly
Cargill Incorporated	Marshall, MO	Mr. Jack Hartwick	886-7473	Yes	20-25	9	Possibly
Cargill Nutrena Feeds	Smithton, MO	Mr. Gene Hudiburg	343-5319	Yes	10	7-12	Yes
Cash U. S. Super	Cole Camp, MO	Mr. Jim Cash	668-3700	Possibly	0	0	No
City Offices	214 N. Lafayette Marshall, MO	Mr. Ron Collins	886-2226	No	0	7-12	Yes
Classic Studio	6th & Kentucky Sedalia, MO	Mr. Ed Brummett	826-8888	Yes	5-10	7-12	Yes
Clay Mead Furniture	Highway 65 Marshall, MO	Ms. Kay Perkins	886-5354	No	0	7-12	Yes
Coffman's Marina	Highway 65 South Sedalia, MO	Mr. John Smith	827-3692	Yes	1-6	9-12	No
Commerce Bank	10th & Walnut Kansas City, MO	Mr. John Wells	234-2000	Yes	20	11-16	No
Consumers Supermarket	Hancock & Broadway Sedalia, MO	Mr. Bill Smillie	827-3190	Yes	15	K-12	Yes
Courts Lawn and Garden	Marshall, MO	Mr. Delford Thompson	886-5000	No	0	7-12	Yes
Creasy's Insurance Agency	Warsaw, MO	Mr. Gordon Creasy	438-5621	No	0	0	Yes
Dala's Boutique	Tipton, MO	Ms. Dala Yantz	433-2626	No	0	0	Yes
Day Care	321 W. Second Sedalia, MO	Mrs. Zimmerschied	826-5040	Yes	1 a day	0	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
DeKalb Ag. Research	Marshall, MO	Mr. Don Wert	886-7438	Yes	10-40	5-9	Possibly
DeLong Dry Goods	Warsaw, MO	Mrs. DeLong	438-5307	No	0	0	Possibly
Deluxe Cafe	Cole Camp, MO	Ms. Marie Musser	668-4521	Yes	2-4	9-10	Yes
Democrat News	Marshall, MO	Mr. Jerry Arnett	886-2233	Yes	25	7-9	Yes
Dentist	Warsaw, MO	Dr. Shepardson	438-5421	No	0	0	Possibly
Dentist	1810 W. 11th Sedalia, MO	Dr. Robert Vit	826-5445	No	0	K-12	No
Dentist	Cole Camp, MO	Dr. D. V. Reimenitter	668-3312	Yes	4-6	9-12	Possibly
Doctor of Osteopathy	1701 S. Lafayette Sedalia, MO	Dr. Joe Bennett	826-6633	Yes	5 at a time, 40 maximum	7-12	Yes
Don's Dive Shop	3312 S. Highway 65 Sedalia, MO	Mr. Don Kabler	826-4681	No	0	8-12	Yes
Don's Welding	Highway 65 South Sedalia, MO	Mr. Don Carr	826-7310	Yes	1-10	8-12	No
Duke Manufacturing	Main & Duke Road Sedalia, MO	Mr. Ivan Stuart	827-2661	Yes	10	4-12	No
Durham Chevrolet	Warsaw, MO	Mr. Floyd Durham	438-5133	Yes	10	8-12	Yes
Eckhoff Clothing	Cole Camp, MO	Mr. Raymond Eckhoff	668-4707	Yes	4	9-12	No
Essers	18 S. Jefferson Marshall, MO	Mr. David Esser	886-2107	No	0	7-12	Yes
Estes' 66 Station	Warsaw, MO	Mr. Gary Estes	438-6022	No	0	0	Possibly
Farmer's Bank of Lincoln	Lincoln, MO	Mr. Karl Kroenke	547-3311	Yes	4-5	9-12	Possibly
Farmer's Insurance	1806 W. 11th Sedalia, MO	Mr. Newby	827-0122	Yes	1-5	9-12	Possibly

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Fire Station	211 S. Kentucky Sedalia, MO	Mr. Jabas	826-8044	Yes	1-15	0	Possibly
Flat Creek Vet. Hosp.	1701 W. Main Sedalia, MO	Dr. Peacock	827-2057	Yes	10-15	K-12	Yes
Gambles	2 S. Jefferson Marshall, MO	Mr. Norvelle Brown	[illegible]36-6823	No	0	7-12	Yes
Bill Greer Body Shop	Main Street Sedalia, MO	Mr. Orval Burd	827-2162	Yes	5	10-12	No
Hallmark	25th & McGee Kansas City, MO	Ms. Rose A. Lightle	274-4667	Yes	20	11-16	Yes
Harris & Reid	Farmer's Savings Bank Marshall, MO	Mr. Mike Reid	886-5544	No	0	7-12	Yes
Heinzler Bros. Welding	Marshall, MO	Mr. Frank Heinzler	886-7775	Yes	20-25	7-9	No
Holiday Inn	32nd & Limit Sedalia, MO	Mr. Jim Grieshaber	826-6100	Yes	40-50	8-9	Possibly
Home Lumber	207 E. North Marshall, MO	Mr. Roland Wood	886-3342	No	0	7-12	Yes
Horse Racing	P.O. Box 951 Sedalia, MO	Mr. Anderson	826-7114	Yes	1-10	9-12	Possibly
Howard Construction	1509 N. Ohio Sedalia, MO	Mr. Olen Howard	826-5750	Yes	5-15	8-12	No
Hurtt's Pharmacy	504 W. 16th Sedalia, MO	Mr. Hurtt	826-2872	Yes	1-10	8-12	Possibly
IBEW Local 814 Credit Union	2111 W. Broadway Sedalia, MO	Ms. June Kuhlman	826-0814	Yes	6 at a time	8-12	Possibly
IGA	2402 W. Broadway Sedalia, MO	Mr. Ralph Huff	827-1452	Yes	25	K-12	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Industrial Loan & Investment	120 W. Fifth Sedalia, MO	Mr. Firman Boul	826-4800	Yes	25	7-12	Yes
J & J's	1421 S. Limit Sedalia, MO	Mr. Jack Smith	827-2485	No	0	0	Possibly
Jack Couts' Running Quarter Horses	Mo. State Fair Grounds Sedalia, MO	Ms. Tina Brown	826-1135	Yes	5-10	K-12	No
Jim's Garden Center	1000 W. Main Sedalia, MO	Mr. James L. Foster	826-4411	Yes	15	4-9	Possibly
Bob Johnson TV & Appliance	2907 W. Broadway Sedalia, MO	Mr. Ray Thompson Mr. Paul Johnson	827-2326	Yes	15-20	7-12	Yes
KDRO Radio	West Highway 50 Sedalia, MO	Mr. Herb Brandes	826-5005	Yes	15	K-12	Possibly
Keeharts	Marshall, MO	Ms. Alice Alexander	886-5611	No	0	7-12	Yes
Kim Originals	2500 E. Broadway Sedalia, MO	Mr. Bill Cline	826-2500	Yes	15	K-12	Possibly
Kings Court	Marshall, MO	Mr. Bill Coman	886-5444	Yes	15	7-12	No
KMMO-KMFL	Highway 65 North Marshall, MO	Mr. Harold Douglas Mr. Jim Athon Mr. Jack Abdon	886-7422	No	0	7-12	Yes
KMOS TV Station	2100 W. Broadway Sedalia, MO	Mr. Stuart Gressley	826-1651	Yes	15	K-12	Yes
KSIS Radio	North 65 Highway Sedalia, MO	Mr. Carl Yates	826-1050	Yes	10	K-14	Yes
Lacuma Builders, Inc.	2800 W. Main Sedalia, MO	Mr. Bob Cook	826-0522	No	0	0	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Lamm, Barnett, Crawford, Barnes, Fritz Law Firm	118 W. Fifth Sedalia, MO	Mr. Donald Barnes	826-5428	No	0	11-12	Yes
Lee's Archery Manufacturing	Route 2 Sedalia, MO	Mr. LeRoy Young	826-6762	Yes	20	7-16	No
Lee's Studio	20 S. Jefferson Marshall, MO	Mr. Lee Beardon	886-7313	No	0	7-12	Yes
Lifeguard	2401 W. Second Sedalia, MO	Ms. Diane Cordry	826-7719	No	1-15	8-10	Yes
Lincoln New Era Newspaper	Lincoln, MO	Mr. George Williams	547-3800	Yes	Inquire	Inquire	Possibly
Locker Plant	Hughesville, MO	Mr. Bill Wheeler	826-8630	Yes	10-15	1-12	Yes
Macy's	1034 Main Kansas City, MO	Mrs. Cullen	221-3737	Yes	20	11-16	No
Magistrate Judge--Pettis County	901 S. Vermont Sedalia, MO	Ms. Hazel Palmer	826-8816	No	0	11-12	Yes
Marshall Chamber of Commerce	214 N. Lafayette Marshall, MO	Mr. Leo Hayob	886-7464	No	0	7-12	Yes
Marshall Floral & Greenhouse	160 W. Summit Marshall, MO	Ms. Juanita Demetz	886-7177	Yes	20	7-9	Yes
Marshall Police	Arrow Street Marshall, MO	Mr. Gerald Stone	886-7411	Yes	15-20	1-12	Yes
Marshall Public Schools	565 S. Odell Marshall, MO	Dr. John Payne	886-2244	Yes	20-30	7-12	Yes
Martin Lumber	Hughesville, MO	Mr. Con Scott	826-7556	No	0	0	No
Mattingly's Variety Store	218 S. Ohio Sedalia, MO	Mr. Bill Stratton	826-5270	Yes	20	7-12	Possibly

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Merle Norman Cosmetics	120 S. Ohio Sedalia, MO	Ms. Sandra Boul	826-6430	No	0	11-16	Yes
MFA Elevator	Cole Camp, MO	Mr. Ed Schnakenberg	668-3231	Yes	6-8	9-10	Possibly
MFA Grocery	Lincoln, MO	Mr. Joe McKnight	547-3621	No	0	0	Yes
MFA Implement	Lincoln, MO	Mr. Clarence Frisch	547-3318	Yes	4	9-12	No
MFA Insurance	1817 W. Broadway Columbia, MO	Mr. Vic Ohman	445-8441	Yes	20	11-16	No
Missouri Division of E. S.	215 E. Fifth Sedalia, MO	Mr. Bill Giles	826-8184	Yes	25	11-12	Yes
Missouri Pacific Railroad	210 N. 13th St. St. Louis, MO	Mr. D. M. Tutke	314-2944	Yes	Arr.	7-12	Possibly
Missouri State Bank	917 S. Limit Sedalia, MO	Mr. William Claycomb	826-1213	Yes	20-25	4-12	Possibly
Missouri State Fair	Box 111 Sedalia, MO	Ms. Myrna Ragar	826-0570	Yes	30	3-7	Possibly
Missouri Valley College	Marshall, MO	Mr. Ed Leslie	886-6924	No	0	9-12	Yes
Model Cleaners	Warsaw, MO	Mr. Richard Kingma	438-5831	Yes	20	K-12	No
Ollison's Garage	2809 E. 12th Sedalia, MO	Mr. Keith Ollison	826-4077	No	0	0	Yes
Otten Truckline	Cole Camp, MO	Mr. Pete Otten	668-3112	No	0	0	Yes
Patricia Stephens Modeling Finishing School	4638 Nichols Parkway Kansas City, MO	Ms. Sue Peterson	531-5866	Yes	60	7-12	Yes
Pepsi-Cola Bottling Co.	Sedalia, MO	Mr. W. C. Ream	826-8144	Yes	30	4-9	Possibly

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Pettis County Ambulance	626 E. Fifth Sedalia, MO	Mr. Joe Wasson	826-5316	Yes	10-15	6-12	Possibly
Phyllis's Beauty Shop	Cole Camp, MO	Ms. Phyllis Templeton	668-3750	Yes	6	9-12	No
Pittsburgh Corning	16th & Missouri Pacific Spur Sedalia, MO	Ms. Rita Kenney	826-4660	No	0	0	No
Post Office	205 N. Lafayette Marshall, MO	Mr. Weislocker	886-6200	Yes	25	7-9	No
Post Office	405 E. Fifth Sedalia, MO	Mr. Roy Hinton	826-8887	Yes	25-30	4-9	Possibly
Quality Body Shop	501 N. Park Sedalia, MO	Mr. Bill Utz	826-2126	Yes	1-10	8-12	No
Rainbow Radio & TV	Lincoln, MO	Mr. Rainbow	547-3317	Yes	4	9-12	No
Ramada Inn	3501 W. Broadway Sedalia, MO	Mr. Darrell Olsen	826-8400	Yes	15	5-12	Possibly
Reinhart Fajen, Inc.	Warsaw, MO	Ms. Eloise Atkins	438-5111	Yes	8-10	9-12	Possibly
Rest Haven Retirement Home	1800 S. Ingram Sedalia, MO		827-0845	Yes	10	1-9	Possibly
Retail Bakery	Sixth & Ohio Sedalia, MO	Mr. Mallory	826-6920	Yes	20	K-9	Possibly
Rick's Body Shop	R. R. #2 Sedalia, MO	Mr. Rick Geer	826-1157	Yes	25-30	7-12	No
Rival Manufacturing Co.	16th & Lamine Sedalia, MO	Mr. Jim Houchen	826-6600	Yes	15	4-12	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Rival Manufacturing Co.	Miller's Park Plaza Sedalia, MO	Ms. Myra Price	827-3860	No	0	0	Yes
Rose & Buckner	72 N. Jefferson Marshall, MO	Mr. Bob Rose	886-2002	Yes	15-20	7-12	Yes
Russell Brothers	Marshall, MO	Mr. Casey Kotowiez	886-7340	No	0	7-12	Yes
Russell Brothers	214 S. Ohio Sedalia, MO	Mr. Bob Johnson	826-5154	Yes	1-10	8-12	No
Scott's Jewelry	East Highway 7 Marshall, MO	Mr. Scott	438-5700	No	0	0	Possibly
Sears	110 W. Third Sedalia, MO	Mr. Finis Galloway	826-6500	Yes	10	7-12	Yes
Sedalia Computer Service	210 E. 7th Sedalia, MO	Mr. Larry McRoy	827-1990	Yes	10-15	9-12	Yes
Sedalia Democrat-Capital	700 S. Massachusetts Sedalia, MO	Mr. Don Keller	826-1000	Yes	15	K-16	No
Sedalia Implement Co.	2205 S. Limit Sedalia, MO	Mr. John Joy	826-0466	Yes	15-25	7-12	Yes
Sedalia Memorial Airport	East Highway 50 Sedalia, MO	Mr. James Addas	826-9796	Yes	Small	K-14	Possibly
Sedalia Police Department	3rd & Osage Sedalia, MO	Mr. Bill Miller	826-0214	Yes	10-15	1-14	Yes
Sedalia Water Department	111 W. Fourth Sedalia, MO	Mr. C. H. Taylor	826-1234	Yes	15	6-9	Possibly
Sheriff's Department	Warsaw, MO	Mr. Bob Bresheare	438-5252	No	0	0	No

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Paul Shinn Oil Company	RFD 3 Warsaw, MO	Mr. Paul Shinn	438-5013	No	0	0	No
Sho-Me Stables	State Fair Grounds Sedalia, MO	Ms. Elaine Knight	827-2243	Yes	5-10	K-12	No
Sound Shop	1716 W. Ninth Sedalia, MO	Mr. Al Reese	827-2223	Yes	20	K-12	Yes
Southwestern Bell Telephone	220 E. 5th St. Sedalia, MO	Mr. Bob Johnson	826-9800	Yes	25	K-12	Yes
Sowers' Horses	Callis Stables Sedalia, MO	Ms. Susan Sowers	827-1778	Yes	5-10	8-12	Yes
Stan's TV	P.O. Box 856, Rt. 2 Warsaw, MO	Mr. Stan Johnson	438-6859	No	1	9-10	Yes
State Fair Community College	1900 Clarendon Road Sedalia, MO	Mr. Fred Davis	826-7100	Yes Check with Betty Blackwell	5-10	9-12	Yes
State Fair Riding Academy	Route 3 Sedalia, MO	Ms. Faith Lovell	826-9767	Yes	1-5	8-12	No
T & O Phosphate	Hughesville, MO	Mr. Larry Owen	826-1813	No	0	0	No
The Craft Shop	318 S. Ohio Sedalia, MO	Mrs. Boatman	827-3041	Yes	15-20	5-12	Possibly
The Dog House	116 W. 16th Sedalia, MO	Mr. Antoine	827-1941	Yes	1-10	8-12	No
Third National Bank	301 S. Ohio Sedalia, MO	Mr. Bob McDonald	826-0611	Yes	30-40	6-9	Possibly
Town and Country Shoes	201 N. Missouri Sedalia, MO	Mr. Charles Rayl Mr. Ken Grott	826-4490	Yes	Small	K-12	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Tullis Hall Dairy Co.	541 E. Fifth Sedalia, MO	Mr. Funnell	826-3030	Yes	10	3-12	No
Tygart & Arth Body Shop	207 E. Belle Marshall, MO	Mr. Ray Arth	886-3033	Yes	25	7-8	Yes
Unitog	Warsaw, MO	Mr. Osborne McMillen	438-5117	Yes	Arr.	7-12	No
Verl's Amoco Service	1801 W. Broadway Sedalia, MO	Mr. Verl Schnepf	827-0040	Yes	1-10	8-12	No
Veterinary	Cole Camp, MO	Dr. Taylor	668-4523	No	0	0	No
Viebrocks Welding	Cole Camp, MO	Mr. Harold Viebrock	668-3233	Yes			No
Vogue Styles	22 Jefferson Marshall, MO	Mrs. Howell	886-6161	No	0	7-12	Yes
W-K Chevrolet Garage	Cole Camp, MO	Mr. Vern Dean	668-4421	Yes	4-6	9-12	Possibly
Walker Publishing Co.	2016 W. Main Sedalia, MO	Mr. Mark Kitch	826-8200	Yes	15	5-12	Yes
Warren Grocery	Green Ridge, MO	Mr. Warren	527-3317	No	0	0	No
Warsaw Auto Supply	Warsaw, MO	Mr. Stan Intelman	438-7321	Yes	Small	1-14	No
Warsaw Sewing Center	Warsaw, MO	Mr. Jerome Kelly Mr. Donald Prunty	438-6919	Yes	6	8-12	Possibly
Warsaw Veterinary Clinic	Warsaw, MO	Dr. N. V. Roff	438-7333	Yes	8	8-12	Yes
WESCEMO, Inc.	651 E. 14th Sedalia, MO	Mr. Steve Laslo	827-3760	No	0	8-12	Yes
Western Auto	Jefferson & Morgan Marshall, MO	Mr. Gerald Leach	886-6813	No	0	7-12	No
Wilken Music	Thompson Hills Sedalia, MO	Mr. Wilken	826-9356	Yes	10	4-12	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Williams Press	Cole Camp, MO	Mr. George Williams	668-4418 547-3911	Yes	4-6	9-12	Possibly
Wilson's Company, Inc.	Box 340 Marshall, MO	Mr. Don Nutten	886-5522	Possibly	12	7-12	Possibly
Wood & Huston Bank	27 North Street Marshall, MO	Mr. Mitchell	886-5575	Yes	25	7-9	Yes
Yeager's Cycle Sales	3001 S. Limit Sedalia, MO	Mr. Rick Yeager	826-2925	Yes	1-15	8-12	No
Yost Chevrolet	Odell Avenue Marshall, MO	Mr. Ken Yost	886-3348	No	0	7-12	Yes